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NATURAL HISTORY
RAMBLES
IN THE
LANE AND FIELD





NATURAL HISTORY RAMBLES.

LANE AND FIELD.

BY

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AUTHOR OF "HOMES WITHOUT HANDS," ETC. ETC.

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LANE AND FIELD.



CHAPTER I.

Definition of a Lane—Distinction between country roads and lanes—The cottage and the gipsy's tent—Origin of the lane—Development of footpaths into lanes and high-roads—Public right of way and its legal status—Difficulties of stopping or diverting a public path—Watershed and lanes—The typical English lane—Banks, trees, and flowers—Description of a Kentish lane, as uninjured by man—Its foliage, flowers, animals, birds, and insects—The same lane after it has been paved, drained, walled, and docked—The Devonshire lanes and their ferns.

PERHAPS it may seem strange that in the Latin language there is no word which represents the English word *LANE*. In the Latin we find "*Angiportus*." But this is simply a narrow street of houses, and is, in fact, what we should call an alley. The same deficiency is to be found in the Greek. A real lane, such as we understand it, has no houses, and even an old and picturesque cottage disturbs the soft quiet, which is its principal charm.

It is exactly what one expects, and even desires, in a country road, where the presence of rustic

humanity forms an almost necessary part of the scene. It would be hardly complete without the ruddy-faced, white-haired children, swinging on a gate, the rather tattered family linen hanging to bleach on the neighbouring shrubs, the family dog coming out to look at, and probably to bark at, the passenger, and the family cow grazing her way along the road-side.

A gipsy-tent is not out of place in a lane, for it is in perfect keeping with the surrounding accessories, and is not a fixed residence. It starts up suddenly in some retired nook of the lane-side, and vanishes as mysteriously as it appeared. No signs of its presence are left behind it, except the little blackened circle where the gipsy fire has been, and where the wild herbage will soon grow all the more luxuriantly for the ashes.

But the lane ought not to have so much as a cottage. It ought to be absolutely calm and still ; its quiet only broken by an occasional country waggon, with its tinkle of little bells. So the "Angiportus" of the Latins, which was entirely composed of houses, has nothing in common with the lane.

A nearer approach to the word is obtained by "Diverticulum," which, after all, is more of a by-street than a lane. But when we try to find a synonym for our real English lane, with its hedge and ditch on either side, its banks and its flowers, we are driven to so clumsy a paraphrase as "*Via utrinque sepimentis munita.*"

Our genuine lane is not a mere short-cut, nor is it the work of a few years. It is a gradual outgrowth

of human life, and its course can be traced from the time when it was begun up to present days.

In times now faded into the distant past, the country was not mapped out into fields, as it is at present, and such an idea as trespassing never entered any one's imagination, everybody walking exactly where he liked.

Gradually little clusters of houses were built, and the inhabitants needed to pass from one to another, naturally taking the shortest route. A footpath—and very bad it was—was gradually formed ; and, as population and traffic increased, the almost blind-path became a well-marked footway, and at last developed into the lane in all essentials, such as we know it at the present time.

Still, it was not quite complete, for there was not the slightest attempt at paving, so that even in summer-time it was very irksome to the feet, and in winter it became a perfect Slough of Despond, especially if the soil had much clay or chalk in it. As for wheeled vehicles, no one was rash enough to take them into it.

Nor was this any great wonder, for the very high-roads themselves were in much the same condition. Within the memory of the present generation, the highroad between Oxford and London was in many parts wholly uncared for. Even within six miles of Oxford there was a large and wide patch of marshy ground, over which vehicles had to make their way as best they could. In fine weather the mail coaches could manage to keep in the regular track, but a long continuance of wet weather forced them to go on

one side or the other, in order to avoid the unseen ruts, and pick out some tolerably firm spots for the horses and the wheels.

In the time of a deep snow the place was absolutely dangerous, for not only were the ordinary tracks buried, but close at hand there was a noisome pond into which the coach might readily stray, and in such a case would certainly be overturned.

However, paving, though it were of an imperfect nature, came gradually into use in lanes as well as in highways, and yet did not interfere with the abundant vegetation which fringed them.

A footpath, when once in use, was almost certain in course of time to develop into a lane, and might expand into a high-road. In this country we have always been jealous of our "right-of-way," and it is now next to impossible for any one to close a path that has been customarily used by the public within the remembrance of living witnesses. A curious example of this tenacity occurred within my own knowledge.

A gentleman was anxious to enclose a certain area of land round his house for the purpose of making experiments in the rearing of wild birds, so that they might breed undisturbed, and never be shot nor trapped. There was, perhaps, no other place in England which would have answered the same purpose. There was a sheet of water for aquatic birds. The soil, and consequently the vegetation, was varied. There were hills, dales, and flat marshy grounds; and it was far from any high-road; so that it was not harassed by the sounds of traffic, nor did it lie in the way of tramps.

For such a purpose, a high wall had to be built round the whole of the experimental area, so as to exclude human beings, dogs, &c. But there existed an acknowledged right-of-way, which the proposed wall would have closed. The gentleman made a much more convenient path, running through another portion of the grounds, at the distance of a few hundred yards. Still, it was held that to throw open a fresh path, and so to create a new right-of-way, would not justify any one in closing the original path ; the magistrates, as I have heard, being much more determined than the people in protecting the old right-of-way.

Permission for the change was at last given, but not before several years had elapsed, during which time the question was periodically brought before the magistrates.

The foregoing remarks apply mostly to paths on tolerably level ground. On hilly land, they are mostly regulated by water, probably because water always runs down hill, and is sure to take the shortest course. So, on such ground, the lane has invariably a streamlet on one side, and generally on both sides ; in that case, one being always much larger than the other. Although they were originally portions of the natural water-shed, the streamlets give material help in draining the fields, and so are of much assistance in aiding modern agriculture.

Mankind, naturally wishing also to take the shortest course, had nothing to do but follow the streamlet, and so by degrees found a path along its side.

Now for the typical English Lane.

It ought to be on somewhat hilly ground, and terminate at either end in a moderately level surface, so as to give a dry soil above, and a moist soil below.

On no account should it be straight, and the more winding it is the better lane it is.

It ought to have banks of differing heights, clothed with shrubs, trees, herbage, and flowers; the latter varying with the season of the year.

It ought to have much evergreen, so as to make a shelter for the little birds, about which I shall have a few words to say, and to act as a screen from the hot sun in summer, and the cold winds in winter. And, for the same reason, the trees and shrubs which border it should be so tall that their tops would be from twelve to thirty feet above the lane.

The beauty of such a lane is almost beyond the power of description, provided that its banks have been totally untouched, and the flowers and herbage allowed to flourish exactly where Nature has planted them.

I have in my mind one Kentish lane, which fulfils all these conditions.

The low-lying, level ground from which it starts stretches for many miles, and is very interesting from more than one point of view. But as such ground will come within the category of marshy land, I am reluctantly obliged to abandon it to another volume of the present series.

The lane begins with but few indications of the beauties which it will afterwards reveal, and has rather a commonplace look about it, appearing to be a mere shelterless road between fields, with an occasional

gate leading to them. Soon, however, it begins to assume the characteristics of a genuine lane.

It takes a sweeping curve, which the experienced eye at once recognises as being due to water, and ascends a tolerably steep incline. There is as yet not much of a bank on either side, and the open country can be plainly seen either on the right or left. On one side can be seen the spire of an ancient ivy-covered church, and, as if to balance it, there is on the other side a lofty hill, grey or dark blue in the distance, with lights always shifting with the course of the sun, and shadows deepening as the clouds drift between the sun and hill.

Presently, the banks become higher, showing that they have been cut, first by the action of water, and next by the hand of man.

Still ascending, the lane begins to pass through wooded country, and the banks become higher and higher. We have already seen such flowers as the dandelion, daisy, and dead nettle ; but now we come to larger and more important flowers, such as the golden-rod, fox-glove, and the like, while the violets may be seen half hidden under the abundant foliage.

Scarcely a square inch of the soil can be seen : so lavishly are the grasses, flowers, &c., scattered over it, that the handiwork of man is entirely hidden by that of Nature. Bright insects are seen among the flowers, and the very hum of their little wings adds to the charm of the Lane.

Higher and higher come the banks ; they then rapidly diminish in height, and we find ourselves on a small plateau, where are no banks at all, showing that

our lane has been cut through a rather steep hill, and is now traversing level ground again.

Only a few yards farther, and we pass through another steep hill, the banks of which are composed for the most part of sandstone, so soft, that it can in most places be reduced to sand by the fingers alone.

Sandstone has a way of falling down in large flakes, especially after a frost or in rainy weather. The hill through which the lane passes is covered with trees, and their roots naturally penetrate deeply into the ground.

The falling sand-flakes, however, uncover the roots, which twine and twist their gnarled and knotted earth-branches into the most fantastic shapes imaginable, and sometimes make an unwelcome appearance in the very middle of the lane, where they become a serious discomfort to travellers. Indeed, in many places, the roots are so numerous, that they act as supports to the sand, and preserve it from falling in large masses.

In some places trees have been cut down, and their hollow stumps project from the bank, in which they are fixed much more strongly than any one would suppose. The bark has been long eaten away by different insects, and its place supplied by ivy, while the dead leaves which have been blown into the hollows, and soaked with the rains, have proved themselves to be admirable places of refuge for snails, slugs, beetles, centipedes, and other creeping things, hateful to the ordinary passenger, but full of interest for the naturalist. Many of them are scorched and blackened, showing that some mischievous boy has lighted fires

within their cavities, and so probably utilised the simple oven by cooking birds' eggs in it.

I write from practical experience, having done so myself in the days of boyhood, and thought that such eggs were far superior to the best that could be obtained at home.

And the willow-stump is the best for this purpose, as the whole of the interior becomes "touchwood," which can be easily set on fire ; and which, when once well alight, will go on smouldering for days, giving out scarcely a wreath of smoke, unless there is a high wind to fan it, and only betraying itself by a slight odour, recognizable by the initiated.

Burrowing creatures are more plentiful, as they find that the soft sandstone affords them a congenial home, and we have the sand-martins, the tiger-beetles, the humble bees, the wasps, and especially the plentiful, but curiously local insect, the Kentish bee, which absolutely riddles the bank with its tunnels. There are also plenty of sand-wasps, but, as we must not trespass upon other domains, I must refer the reader to the volume which treats of Life Underground, for detailed information about them.

Still, there they are, and necessarily must be mentioned.

And so the lane proceeds upwards on its winding course, terminating in a wide heath, bounded on one side by a fir-wood, and having on the other side an unbroken view of many miles ; the Thames flowing far behind, and the horizon edged with the dark irregular outline of a distant forest.

Along the lane are sure to be bright butterflies of

differing kinds, as they seem to appreciate the shelter from the wind which they find there.

Butterflies hate wind, especially from the north or north-east. Their large wings are powerless against the wind, which whirls them about as it pleases. I lately lost a specimen of the rare "Camberwell Beauty" by means of the wind. It came quite close to me, but before I could realize its identity, it was caught by the wind and hurried away. Being in an angle formed by high walls, the insect could not guide itself, but was quite at the mercy of the contending currents of air. At last it rose above the wall, and in a moment was carried out of sight.

I do not intend, in this little work, to describe any rarity, whether belonging to the animal or the vegetable kingdom, and therefore shall not again refer to this splendid butterfly.

Dragon-flies have a singular predilection for lanes, though not for the same reason as the butterflies. They are swift and strong enough to cope with any ordinary wind, and, in fact, rather prefer a windy to a calm day.

Most other insects are blown about as if they were feathers, while the dragon-fly takes advantage of their helplessness, and catches them just as he chooses. Ordinarily, a dragon-fly has but little chance of catching the hoverer-flies, whose wings are so swift that the eye cannot follow the path of the insects through the air.

They come and go like visions. The wings are almost invisible, their only indications being a kind of halo, produced by the rapidity of their motion.

Move but a finger and the flies are gone. Remain quiet, and they are back again in exactly the same spot, but how or whence they came is a mystery.

Against such lightning-like flight the dragon-fly can do nothing. But, if a wind rises, the hoverer seems to lose nearly all control over its movements, so that the dragon-fly has no great difficulty in capturing it.

Birds, especially the smaller kinds, are always plentiful, and, if people understood more about them, would be more plentiful still. There are comparatively few which have definite songs, but all of them can twitter, even if they can do no more; and that ceaseless chatter of bird-voices, together with the hum of insect-wings, are part and parcel of the beauty of an English lane.

As to the birds, there are many whom we only have among us for a short time; some of which, such as the nightingales, have but a brief period of song. Yet, there are many which stay with us throughout the year, and which are sure to be at hand wherever they can find food and shelter.

Similarly, the plants are not all in blossom at the same time. There are certainly several which care nothing for the seasons of the year, and which produce their flowers in winter as well as in summer; these are, however, exceptions to the general rule, which ordains that some flowers shall appear in the early, and some in the later spring, that the greater number shall be summer flowers, that many shall blossom in autumn, and very few in winter.

Still, whether in flower or not, the plants are to be found in the lane throughout the greater part of the

year, and it will be seen that, although the plants of the lane may be found in the neighbouring fields, they do not bloom so early there, nor retain their flowers so long. This is probably owing to the shelter which they enjoy in the lane.

Insects, too, are greatly affected by the season of the year, and as many of them only live for a very short time in the perfect state, we naturally expect to find, as we do find, a series of them extending throughout the year.

Not many miles from this lane there is another, exactly like it in all the conditions of soil, vegetation, and animal life.

It was a favourite resort of mine ; and some years ago there was scarcely a day when I did not traverse it. Lately, I visited it again, and was sorry that I did so, for the hand of man had been heavy upon it.

The lane opens from the road with a bold curve, and sinks rapidly, partly by cutting, and partly by the natural undulation of the land, until it is crossed by a little and very rapid brook. Thence it re-ascends until, like the lane already mentioned, it terminates on a heath, resembling in many particulars that which has just been described.

Some years ago, the entrance to this lane was so picturesque, that strangers invariably paused to enjoy its beauties before they passed it. Bordered on one side by trees, it was bounded on the other side by a high bank. Trees had formerly grown there, but they had been cut down long ago, and nothing remained of them but their stumps, almost entirely

decayed, and their now useless roots, jutting out in most fantastic patterns.

Among them had lodged a wonderful number of flowers, and herbage of various kinds, while ivy, clematis, goose-grass, hops, briony, convolvulus, and similar plants hung in massive clusters from any spot where they could find a hold.

When the bank came nearly to an end, its place was taken by hawthorn bushes, holly, &c., among the branches of which the blackberry intertwined its trailing stems in wild confusion. Its wealth of vegetation naturally attracted animal life, and altogether it was just the model of an English lane.

But, on my last visit, all its charms were gone, and I could not find it in my heart to enter my once-loved lane. The high, sloping bank, with its profusion of verdure, was gone. It had been cut away, and there is now a high stone wall where the roots and the ivy had been.

The hawthorns and hollies had been divested of nearly all their branches, while the remainder had been cut half through, bent down, and interlaced so as to form a sort of hurdle about three feet high.

On the other side the bank had been treated little better, and was finished off with earthenware drain-pipes.

Some men were still at work upon the unfortunate hedge, and I learned from them that the hawthorns and hollies had been cut down because they harboured small birds, and prevented the sun from shining on the crops.

Now, as the hedge had a northern aspect, the latter

reason for its destruction was absolutely groundless. It acted as a shelter from the north wind, which in that place blows with exceeding severity, and none but ignorant persons would have deprived their arable land of such an advantage.

Again, the hedge ought to have been preserved for the very reason given for destroying it, namely, the harbouring of small birds. The more birds it harboured, the better for the farmer; but it is next to useless to offer such suggestions to a farmer, who exterminates all the sparrows, starlings, titmice, chaffinches, &c., that come within his reach.

There is no possibility of ignoring the fact that sooner or later our dear old English lanes are doomed, and that they will be ruthlessly and ignorantly destroyed. We think, and rightly, that the Wiltshire farmers committed an act of sheer desecration when they broke up the giant architecture of Stonehenge to make walls for farm-houses and pig-sties. They commit a scarcely less serious sacrilege when they destroy a lane, and convert it into a paved gutter.

These two lanes are good examples of the lane as it exists in Kent.

The Devonshire lane is curiously different in many respects. It is generally edged with stone instead of trees and bushes. The stone is red, as by the way are generally the soil, the cattle, and the men. But, owing to the extreme, and almost perpetual moisture, the stone is soon covered with mosses, lichens, and ferns, which give it a singularly rich appearance.

Devonshire is, indeed, the Fern Paradise, as Mr.

Heath so appropriately named it. A wall can hardly be finished before the tiny fern-fronds come peeping from between the stones ; while every now and then along the lane there is a little spring, trickling into a rough hollow, which has become a sort of fairy bower, so overgrown is it with the various ferns. Those who wish to see ferns in the fullest luxuriance of unrestrained nature, and who do not object to rain, ought to visit Devonshire, were it but for the sole purpose of wandering through the fern-clad lanes, backed up as they are by the rich ruddy hue of the rocks and soil.

CHAPTER II.

MAMMALS OF THE LANE.

Animal life in the Lane—The **HEDGEHOG**, and its various local names—Its haunts and nocturnal life—Use of the prickles—The **Raven** and the **Hedgehog**—The **Hedgehog** in the house—Food, and mode of eating—Hibernation and migration—The **Dormouse** and its nest—Dormice as pets—The **BAT**—Various species of Bats—Their wonderful structure—Swallows and Bats—Mode of taking prey—Hiding-places of the Bats—Their great use to mankind—The **Long-eared Bat**—Bats as pets—Their food in captivity—The **WEASELS**, and their serpentine movements—Mode of killing prey—Rats and Weasels—Rabbit-killing—A gratuitous dinner—Boldness of the Weasel—The **STOAT**—How to distinguish it from a Weasel—The Stoat identical with the **Ermine**.

HAVING now taken a cursory view of the Lane, we will proceed to its inhabitants, taking animal life first, and beginning with the mammals.

One of the most characteristic examples of animal life as belonging to a lane is the **HEDGEHOG**, the very name of which implies its connection with the lane and its hedge.

Sometimes it goes by the name of **Urchin**, which I presume to be a corruption of the Latin name *Eri-nāceus*. In Devonshire it bears the rather curious

title of Ajiboar, which is, when analysed, the Devonshire pronunciation of Hedge-boar. By way of variation it is also called Vuzpeg, *i.e.*, Furze-pig.

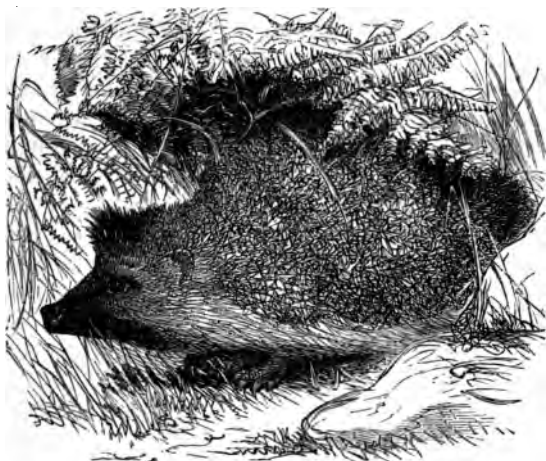
The hedgehog is common enough in our lanes, but is seldom seen except when discovered by dogs. During the day it conceals itself in an ingenious shelter, generally composed of dead leaves which have collected in some dry hollow. By nightfall it comes from its retreat in search of food, and is therefore a very familiar sight to entomologists who are in the habit of going out at night with a lantern.

It is more active than is generally supposed, and when alarmed by the glare of the lantern, scuttles along at such a pace that it might easily be mistaken for a large rat. In spite of its speed it can easily be captured, as the light dazzles it, and it does not know whither to go. When touched it will not bite, but will roll itself into a ball, tucking its head and legs inside the ball, so that its sharp spines radiate in all directions, and form an effectual protection against almost any foe except man. The raven, however, cares little for the spikes, driving its long, sharp beak among them, and into the animal's body, without sustaining any harm itself.

Sharp, though, as are its prickles, it can be picked up without harm even to a tender skin. By placing the hands on either side, the prickles can be gently pressed towards the tail, and the creature is then quite harmless.

It can be easily tamed, and is a great help in houses which are much infested with cockroaches. Being nocturnal in its habits like the cockroaches, it

makes great havoc with them at night, and really needs little other food. After a while it will be tame enough to allow itself to be picked up without contracting itself, and will lay its prickles so closely



HEDGEHOG.

against the skin that it is quite innocuous. I may here mention that the bristles of very young hedgehogs are white, soft, and incapable of doing damage, becoming hard as the animals approach mature age.

It is much more active than might be supposed from its appearance, or by only seeing it on a level surface. It is a good climber, and can scramble to heights where few persons would expect its presence.

When at liberty it feeds mostly on worms, frogs, &c., and is a great destroyer of snakes, when it can

catch them, seizing them by the neck, crunching them systematically from head to tail, and then eating them. During the winter it undergoes the wonderful process of hibernation. All animals which hibernate exhibit similar symptoms, though in varied degrees. They entirely cease to eat, and almost entirely to breathe. The action of the heart is scarcely perceptible, and all the bodily functions remain in abeyance for several months. The dormouse, whose nest may often be found in a lane, affords an excellent British example of hibernation, and so do the bats, and even the squirrel is a partial hibernator.

Snakes, blindworms, and other reptiles are also hibernators, and all for the same reason, namely, that they are dependent for food upon insects and other creatures which do not make their appearance in cold weather, and consequently would perish but for some such provision.

The swallows and other migratory birds meet the difficulty by flying off to warmer climates on the approach of winter, and therefore do not need to hibernate, although at one time it was thought that they passed the winter at the bottom of lakes and pools. But not even the bats can make such long journeys through the air, and so they are enabled to remain quiescent until the insects on which they feed again make their appearance.

Just a few words about the DORMOUSE, whose name has been casually mentioned.

Like the hedgehog, it is seldom seen except by those who know where to look for it, because it seldom comes out except after dusk, and even then

is protected by its agility, and its dark colour, which renders it difficult to be detected.

Yet it is plentiful enough, and so are its nests, though they would escape casual observation. They are always constructed in the forked branches of shrubs, and even when seen appear to be little more than leaves and grass-blades casually entangled in the fork.

That the dormouse is readily tamed is well enough known, but I for my own part, would rather have a tame rat than a tame dormouse. The former is a lively, active, intelligent being, capable of being taught a variety of tricks, and, if kindly treated, showing a strong affection for its master, whereas the dormouse is asleep for the greater part of its time, and is scarcely awake long enough to display any intellectual qualities.

Then there are the BATS, of which mention has been casually made.

In the evening of a warm day, and even before the sun has gone down, the bats are busy in the lane, flitting here and there, with their peculiarly irregular flight, and filling the air with their tiny shrieks. It is curious that the bats and swallows, which both feed on flying insects, should use such different modes of catching them.

The swallows dash through the air with the swift, darting flight with which we are so familiar, while the bats have much the aspect of butterflies and moths in the air, so that towards dusk we can hardly tell whether the flying creature is a small bat or a large moth.

Then the mouths of the swallows are very wide, the flattened beaks, though short and small at the tip, being broadened rapidly towards the base. The mouth of a bat, although intended for the same purpose, is very small, and scarcely seems capable of seizing a flying insect. In this task it is aided by the rows of little teeth in each jaw. The teeth are as sharp as needles, and scarcely larger, but they are so arranged that even the tiniest gnat cannot escape between them.

Sharp though their teeth be, no English species of bat can bite so as to injure even a delicate skin, their mouths being so small.

During the daytime the bats, whose eyes are only adapted for twilight, conceal themselves in hollow trees, old buildings, and similar localities, where they can be in the dark. They always hang by their hind feet, which can be hitched upon the slightest projections, and wrap themselves in the wide webs of their fore paws—the wings, as they are popularly called—as a soldier wraps himself in his cloak when he sleeps in the field.

No one need be afraid to handle a bat, and I strongly advise any reader to take care of the first living bat that he can find, to examine it carefully, if possible to keep it long enough to note its habits, and then to let it go, to carry on its work in its own way. When I add that its chief work consists in keeping within due bounds the gnats, which are such plagues by night, and sometimes by day, it will be easily understood that the bat earns its right to protection.



COMMON BAT, OR PIPISTRELLE.

There are several species of British bats, and, in my opinion, the Long-eared Bat is by far the most interesting. There is no difficulty in distinguishing it, as it is alone in possessing the exceedingly large ears from which it derives its popular name.

A stuffed specimen can give but a very imperfect idea of these beautiful organs. They are not merely held out stiffly from the head, but are thrown into graceful and always varying folds, so as to give a wonderful amount of expression to the intelligent little face. The membrane of which they are composed is so exceedingly thin and delicate that it is quite translucent, and it is traversed by multitudes of tiny veins and arteries, through which the passage of the blood can be seen with the aid of a microscope.

They can be curved at the tips, are in perpetual motion, and are so abundantly supplied with nerves that they seem to aid the animal in guiding its course through the air. The bat is peculiarly sensitive about its ears, and when it wraps itself in its wings for sleep, it lays the ears back and covers them from harm.

There is a sort of inner ear, scientifically named the "tragus." It is long and pointed, and when the bat is at rest, the tragus alone protrudes, so as entirely to alter the aspect of the animal.

It is easily tamed, and will become so familiar as to take flies out of the hand.

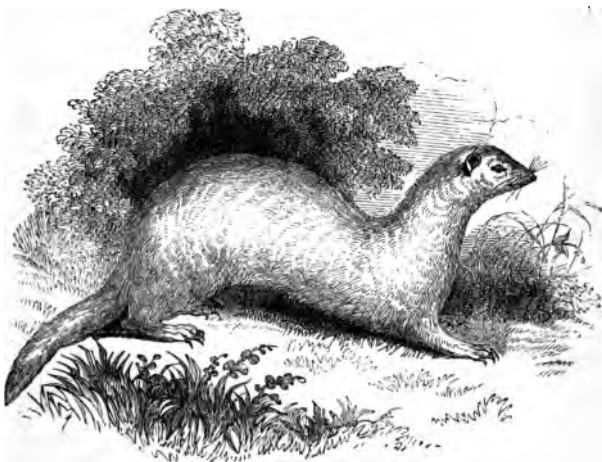
In default of flies, which are its natural prey, it will feed on raw beef, if cut into little pieces not larger than vermicelli. I have tamed several of the pretty little creatures, keeping them long enough to watch their habits, and then turning them loose. Mealworms have been recommended, but I have always found them too large for the tiny mouth of the bat.

WEASELS and STOATS are also very fond of lanes, and are much more plentiful than is generally imagined. Those who are unused to observation may pass through a lane two or three times daily and never see either one or the other, while a practised naturalist will not have much difficulty in finding both animals.

They may be almost called the serpents of the mammalia, their long, lithe bodies, and short but powerful limbs enabling them to wind their tortuous way among the shrubs and vegetation as easily as the serpents themselves. Although invariably called "vermin," and ruthlessly destroyed by gamekeepers, they

are of the greatest use to the game owner. They are dire enemies of the rat, which, as most persons know, is very destructive among game.

Their mode of killing their prey is always the same, namely, a bite from the little canine teeth, which are sharp as needles, and penetrate to the brain. The late Mr. Waterton had a great respect for the weasel, on account of its rat-destroying propensities, and always encouraged it in his grounds.



WEASEL.

True, the weasel will occasionally destroy a rabbit, but these animals are so plentiful that they are not reckoned as genuine game, such as hares, pheasants, and partridges, and in many places swarm to such an extent that they become positive nuisances, and have to be periodically thinned. Thus the weasel is an

assistant to the gamekeeper, and if the man really knew his business, would be preserved instead of being destroyed and nailed on tree-trunks and barn-doors.

Mr. Waterton told me a rather curious anecdote of a weasel and a rabbit.

In many country roads heaps of rough stones are piled for the purpose of mending the roads. Sometimes the stone-heaps are left untouched for several years, and in such cases they form excellent strong-holds for the weasel.

One day a labourer was sent to break up some stones for mending a country road, and while he was thus engaged, and talking to Mr. Waterton, the latter heard a rabbit squeak, and exclaimed that there was a weasel killing a rabbit. Jumping up, he found a fine buck rabbit lying dead in the hedge, picked it up, and gave it to the man, so that the weasel earned the man his dinner.

In his well-known essay on the weasel, the same naturalist narrates a very similar incident.

"Some two or three months ago I heard the squeal of a rabbit whilst I was walking in the flower garden, and, on arriving at the place whence it proceeded, I found the keeper there before me, with a fine old rabbit in his hand. He had seen the weasel on the rabbit's back, as he was proceeding down the hill, and he had scarcely rescued it from the grasp of its destroyer ere it died in his hand.

"I took out my penknife, and I dissected the death-wound, which was just under the ear. There was no laceration to be seen. Two small punctures merely appeared as though they had been done by

the point of a pin, and they were surrounded by a spot of extravasated blood, about the size of a sixpence."

It is a bold little animal, and has a funny fashion of sitting up when disturbed, crossing its fore paws in front of its nose, and peering inquisitively between them at the cause of its alarm.

The STOAT (*Mustela erminea*) is much less common than the weasel. Still, it is one of the inhabitants of lanes, and can generally be found by those who understand the habits of animals.

Many persons, especially the country labourers, confuse the two animals together, and cannot distinguish between a small stoat and a large weasel. They may, however, easily be distinguished by the redder hue of the back in the stoat, and the comparatively short and black-tipped tail.

Few ladies, who in winter pass along a lane, bearing an ermine muff, and having their dress trimmed with ermine, have any idea that they may meet in the English lane the very animal which furnishes the costly fur which decorates their garments. Yet the ermine is nothing but the English stoat, which is found in northern regions, where its ruddy fur changes into a beautiful creamy white. The tip of the tail, however, retains its jetty blackness, which distinguishes it from the weasel, and, when the skins are prepared, forms so telling a contrast to the white fur of the body.

Rats are often to be seen running across lanes, but they properly belong to the house and barn, and cannot be reckoned among the inhabitants of the lane.

CHAPTER III.

BIRDS OF THE LANE.

The Wren and its song—Its general habits—The nest and eggs—The Blackbird or Ouzel-cock—Its early nesting—Grosbeak—Leaping at Gooseberries—Its rich song—The Thrush and its song—Its services in the garden—Snails and stones—Its eggs as delicacies—The Great Titmouse—Its unpleasant voice—Uses of the Titmice—Their activity—Localities of its nest—The Blue Titmouse—Billy Biter—Odd situation for a nest—Finches of the Lane—The Greenfinch—Its voice and nesting—The Brown Linnet or Redpole—The Chaffinch and its habits—Mistaken persecution—Its beautiful nest—Tree climbing—The Red-backed Shrike and its curious habits—Parental anxiety—Nest and eggs—The Yellow-Hammer—Its curious cry—Nesting-places and scribbled eggs—Wagtails—The Pied Wagtail and lane-browsing cattle—Nest and eggs—The Yellow Wagtail—Golden-crested Wren and its beautiful nest—The Redbreast—Strange discovery in a Robin's nest.

It is comparatively easy to distinguish the animals of the lane from those of the field, but when we come to the birds our task becomes more difficult. I shall therefore take,—

FIRST, the smallest of the lane-haunting birds, the WREN (*Troglodytes vulgaris*), whose round, trim body, and perky, cocked-up tail are so familiar to every one who has walked in the country.

It does not seem afraid of man, but pops in and out of the hedges, never very far from the ground, chirping the meanwhile its low, joyous twitter, and, like the red-breast, retaining its song throughout the winter.



WREN.

Where does it build its nest? Anywhere; and a very curious nest it is: among old ivy; in the hollows of decaying trees; in the corners of out-houses; in hay-ricks; and, in fact, anywhere, if the bird finds the place to suit its convenience.

For so little a bird, the nest is extraordinarily large;

it is made of dry leaves, grasses, and similar substances, and is always built with a sort of domed roof, the bird gaining access at the side.

Yet, large as it is, the nest of the Wren is not so easily seen as many nests not one quarter its size, and, indeed, is as often found by the hand as by the eye. It is almost invariably placed in some shady spot, and, even when the attention is directed to it, the nest might easily be mistaken for a casual mass of dry leaves and grass, thrown together by the wind in course of time. Within this very comfortable nest are generally some seven or eight eggs, corresponding in size to the mother-bird.



BLACKBIRD.

NEXT, we will take the BLACKBIRD (*Turdus mérula*), one of the regular frequenters of lanes. This is

the "ouzel-cock" of Shakspeare, with its "orange-tawny bill," contrasting so boldly with the black feathers.

Were it but for the sake of its voice, spare the blackbird, and do not harry its nest. This may easily be done, as the blackbird is very bold, and will sometimes build before the leaves appear, so that its large, conspicuous nest can at once be seen. I rather fancy that such very early nests are the first efforts of young birds, and are usually unsuccessful, even when they escape the prying eyes of the egg-hunting boy.

Blackbirds of experience always build their nests amid thick foliage, and if a fine holly-bush be in the lane, a blackbird's nest is nearly sure to be in it.

So nothing is easier than to take a blackbird's nest, but it ought not to be done. It is true that the blackbird is an inordinate glutton on gooseberries, whence the Scotch call him Grozel-cock. You may see him under the bushes, selecting the ripest fruit, jumping up at them, and biting them off nearly as far as the stalk.

But its wonderfully melodious voice more than compensates for the damage which it does in fruit-gardens. Flower-gardens it never injures. Early in the morning the full, mellow, fluty tones of the blackbird are heard, and on fine nights it will continue to sing long after the sun has gone down. Often have I been awakened at dawn by this delightful songster, and pardoned the havoc which he made among my fruit-trees for the sake of his delicious song.

The voice of the THRUSH (*Turdus musicus*) is by many persons thought to be superior even to that of

the blackbird, and it remains in full song for a very long period.

As to its services to the gardener, they cannot be over-rated. The favourite food of the thrush is the snail, and the bird destroys at least a hundred where the gardener can scarcely kill one. Snails can hide themselves cunningly enough, and in dry weather



THRUSH.

they are so effectually concealed that scarcely any creature but the thrush could find them. But he depends greatly for his living on the snails which he finds.

He drags them from their hiding-places, and as his beak is not strong enough to pierce the hard shell of

a large old snail, he takes it to some convenient stone, and bangs it against the stone until he has battered the shell to pieces.

Like the blackbird, he is a great fruit-consumer, but his services in snail-killing alone more than repay him for the fruit which he eats, let alone the recompense which he deserves for his cheering song. The thrush is more careful of shelter for its nest than is the blackbird, and it often happens that the nest is discovered by a gleam of light falling on the pretty blue eggs with their little black spots.

When I was a boy at school, the eggs both of the thrush and the blackbird were favourite delicacies with myself and schoolfellows. They were so plentiful that we did not require them for the cabinet. We could not make up our minds to leave them, especially as we knew that they would be taken by others, and so, boy-like, we ate them. We thought them far superior to the commonplace eggs of poultry, and possibly they were so. Sometimes we boiled them in an iron spoon, a tin mug, or an inkstand, but we generally dispensed with cookery, and ate them raw. We were thoughtless, and did not see the evil of our deeds.

Passing through the lane in the early morning, we shall be tolerably certain to see the GREAT TITMOUSE (*Parus major*), as it runs about the trees in search of insects.

Close to a house which I formerly occupied, there was a lane, the trees of which formed a favourite resort. There are not many birds whose notes are unpleasant to me, but the Great Titmouse is one of

them. It has no real song, and scarcely varies its notes, continuing to utter its monotonous cry, "Chee-chee-chee-chee" without cessation. If it would only stop occasionally, it might be endurable, but when



GREAT TITMOUSE.

the bird is near, the cry is almost as irritating as the jangle of a school-bell. Repeatedly I have been obliged to leave my room and frighten away the birds, before I could write an intelligible sentence.

Of all our little birds, none are so deserving of our gratitude as the titmice, two species of which are hunters of lanes, while another is more a denizen of the field.

They feed entirely on animal substances, and especially on the tiny insects which inhabit the crevices in the bark of trees. They are as active as monkeys ; and, indeed, seem to be the monkeys of the bird tribes. They run up and down the boughs, caring nothing whether their heads or tails be uppermost. They scuttle along the slightest twigs with their beaks downwards, and they will even cling to leaves at the very extremity of a branch, and continue their search after insects, even though the twig be whirled about by the wind as if it were a whip-lash.

The Great Titmouse is nearly as odd in its nesting as the wren, and it has a kind of instinctive notion that it will be safe near human habitations. It almost invariably chooses a hole of some kind, and in such cases, little pains are taken with the nest. But, when it is forced to build in an exposed spot, it can build a very complete nest. Hollow trees, especially at some height from the ground, are favourite residences of the Great Titmouse.

As to the tiny BLUE TITMOUSE (*Parus cæruleus*), it is one of the most ubiquitous birds in England, and has received all kinds of local names.

One very appropriate name is Billy Biter, given to the bird on account of the sharp peck which it will deliver at a finger if thrust into the hole where it has built. It generally accompanies the peck with a smart hiss ; and many times the bird-nesting boy has retreated in terror, thinking himself to have been bitten by a snake.

There are very sufficient grounds for such a mistake,

as the beak of the Blue Titmouse, though short, is very strong and sharp, as is needful in prosecuting the daily task of procuring food.

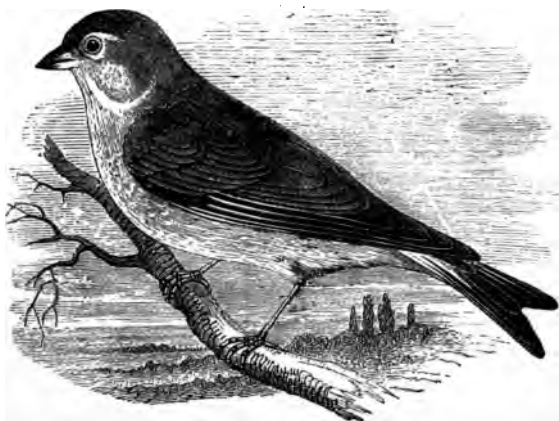


BLUE TITMOUSE.

In nesting, it much resembles the Great Titmouse, but is even odder in its choice of a house. Two of the strangest localities I have recorded in another work. In one case, the bird had contrived to find its way into the interior of a weather-cock on the summit of a church-steeple; and in the other it had built inside a bee-hive in full work, neither injuring the inmates, nor being injured by them.

The "Finches of the Grove" I leave for another hand, and have only space enough to mention some of the Finches of the Lane.

One of these is the GREENFINCH (*Fringilla chloris*), the second of the birds whose cry is distressing to the ear. It is a prolonged and loud whistle, beginning very high, and slurring downwards as if the bird were in the extremity of woe. To me it has a most depressing effect ; but as the bird is very plentiful, and the whistle can be heard at a great distance, it is useless to drive the vocalists away. Its nest may generally be found some height up a tree, and against the trunk.



LINNET.

Then, there is the BROWN LINNET (*Fringilla cannabina*), generally called Redpole by the dealers, on account of the tuft of reddish feathers on the crown of the male wild bird. Strange to say, the tuft dis-

appears in captivity. This bird may often be found in the lane, as it feeds upon the seeds of various plants which always exist in profusion. Those of cruciferous plants seem to be his chief favourites ; but he does good service in eating the winged seeds of the thistles and dandelions.

It is rather a stupid bird, as far as nest-making goes, building its nest in the most exposed situations, where it is sure to be seen.

As to the CHAFFINCH (*Fringilla cœlebs*), I have had many doubts whether it should be classed among the birds of the lane, or those of the field ; the season of the year determining its locality.

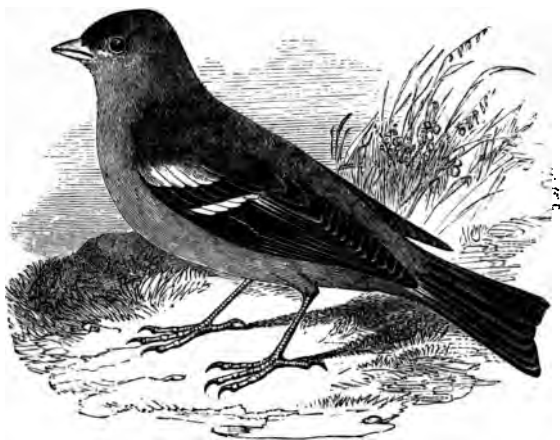
In the autumn, large flocks of chaffinches may be seen in the fields, and it is said that the sexes keep themselves strictly apart ; a habit which has gained for the bird the name of Cœlebs, *i.e.*, Bachelor.

In the early part of the year, however, it is generally found in the lanes ; and as there is scarcely a lane in England in which the nests of the chaffinch may not be found, I prefer to class the bird among the inhabitants of lanes.

Farmers and gardeners, especially those who cultivate fruit-trees, have an intense hatred of the chaffinch, and, if possible, will shoot it whenever they see it pecking away at the buds in spring-time, thinking that it is destroying the future crop of fruit. And, there is no bird easier to shoot, for it is very bold, allowing itself to be approached quite closely, and keeping up its perpetual cry of "pink-pink-pink," as if inviting attention.

I believe that the gardeners are quite wrong in

shooting it, and that when it appears to be destroying buds, it is only pecking at the destructive insects upon them or in them. It is engaged in collecting food for its young, and the little insects are much better adapted



CHAFFINCH.

for that purpose than the fruit-buds. Even if the bird were doing some harm, the shots would do more, and a charge of such shot as is used for killing small birds would certainly make terrible havoc among the twigs and buds.

The late Mr. Waterton, whose knowledge of birds' habits was unrivalled, encouraged the chaffinch within the walls of Walton Hall, and never would allow it to be destroyed. Yet, his fruit crops were singularly

abundant ; and, as I have often seen, neither fruit nor flowers suffered. It is worth while to read his valuable essay on the chaffinch, and I am quite sure that no one who has carefully perused it, will intentionally kill another chaffinch.

It cannot be denied that the chaffinch, like all the finch tribe, does eat seeds, but its consumption of them lies among the seeds of thistles, burs, dandelions, and other wild plants, which would, but for the chaffinch, have been carried into the garden, where they are completely out of place, however they may adorn the lane and the field. So, with such a witness in its favour, the chaffinch ought to be protected, and boys should be warned to leave its nest alone, and not to pull it down from sheer wantonness.

As to the nest, find it if you can, and when you can make sure of doing so, you may congratulate yourself on your eyesight. For the nest of the chaffinch is so ingeniously made, that it seems to be part of the tree itself, and really looks more like a natural excrescence of the bark than the nest of a bird. It is most beautifully made of moss, hair, and feathers ; and is covered on the outside with lichens stuck on it with spider's-webs. So deceptive is its appearance, that an experienced bird-nester will often pass the nest of a chaffinch as he ascends the tree, and only notice it when he looks down on the pretty spotted eggs.

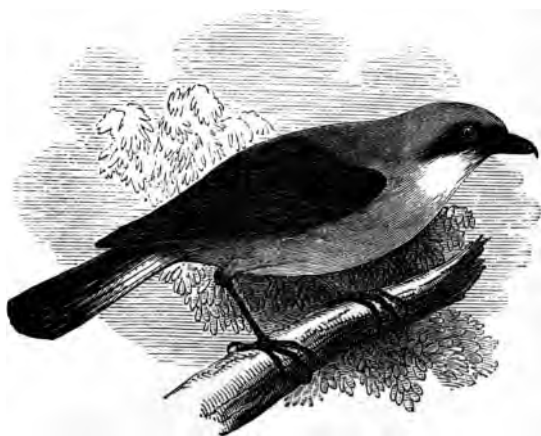
Of course the SPARROW (*Fringilla*, or *Passer domesticus*), is to be found plentifully in lanes, but he belongs to the house, the barn, and the farmyard, and does not come within the present category.

In many lanes, you may be amused with the antics

of the RED-BACKED SHRIKE (*Enneóctonus collúrio*), the most common of all the British shrikes.

This silly bird really takes the greatest pains to make itself conspicuous, and to point out its nest, by the thoughtless anxiety with which it thinks to drive away the foe.

If it would only be quiet, it might be passed without observation. But, when it has a nest, it is so terribly anxious, that it sets up a loud squall as soon as it sees an intruder ; flits before him along the hedge,



RED-BACKED SHRIKE.

shrieking dismally at every few yards, and increasing its cries as the nest is approached.

Then, as if to make the large nest as conspicuous as possible, the Red-backed Shrike sticks all kinds of

small creatures, mostly beetles, humble-bees, etc., on the thorns, and will sometimes impale very young birds, always pushing the thorn between the skin and the flesh. This has been denied, but I have seen it, and know it to be true. So, if the passer-by sees several insects remaining perfectly quiet on the hedge, and looking as if they had no business there, he will invariably find that they are all impaled on thorns, and that a shrike's nest is close at hand, even if the parent birds are absent, and do not attract his attention by their shrieks.

Then the nest itself is rather large, and its pretty white eggs with their ring of pink spots are so conspicuous, that, what with the cries of the bird, and the nests, and the eggs, it is wonderful that a shrike should be left in England.



YELLOW-HAMMER.

• Quite as conspicuous as the shrike is the YELLOW-

HAMMER (*Emberiza citrinella*), and it has, like that bird, a habit of flitting along the lane before pedestrians, and uttering almost perpetually the odd little song, which has almost a human articulation about it. In many parts of England it is said to cry, "A little bit of bread, and no che-e-e-se," and really the song is not at all unlike those syllables.

It is a more wary bird than the shrike ; and, although it will allow a man to follow it without seeming alarmed, it takes care to preserve an interval of some fifty or sixty yards, just as if it knew the range of a gun.

It generally chooses the sides of lanes for its nesting-places, and manages to conceal its domicile so perfectly, that, although it is always placed close to the ground, and sometimes actually upon it, a sharp eye is needed for its discovery.

The eggs are generally favourites with boys, on account of the dark purple-brown lines scribbled over the surface, and looking exactly as if they had been made at random with a pen. Some eggs are merely covered with scribblings and blots, as if the pen had sputtered, while others are simply purplish white, with hardly a mark upon them.

The pretty little WAGTAIL is familiar to all who have walked along a country lane, and gains its name from its habit of jerking its tail while on the ground, especially when settling after its brief flight. Why it does so, no one knows, any more than he can tell why a duck wags its tail sideways. But few persons are aware that no less than nine species of wagtail inhabit England, of which the most common is the PIED WAGTAIL (*Motacilla Yarréllii*).

It has already been mentioned, that a lane is not complete without water, and although the wagtail is not an aquatic bird, it loves to feed upon the insects that are found close to the water's edge, and will even



PIED WAGTAIL.

pick up the tiny fish-fry and young tadpoles that venture, after their wont, close to the bank. Often, in lanes, the cattle which browse their way slowly along disturb with their feet the little insects that lurk among the herbage, and wherever cattle are allowed to graze after this fashion, the wagtail is nearly certain to be at hand, ready to snap up the insects, and caring nothing for the lad who is in charge of the cows.

Winter often drives it away from both lanes and fields, and it is then obliged to seek the sea-shore,

where the water never freezes entirely, and where food of some kind is always to be obtained. Still, its chosen spot is the quiet English lane, where it is seldom if ever disturbed, and in the neighbourhood of which it mostly builds its nest.

Should a wood-cutter's house be near a lane, the wagtail will almost invariably be found to have taken up its abode in one of the stacks of brushwood. Stone-heaps also afford shelter for the Wagtail's nest, and those who know how to look for it will mostly find it. Failing stone-heaps and faggot-stacks, the sides of disused quarries, or even the holes of old walls, will serve the purpose of the wagtail.

The eggs are four or five in number, and they are greyish-white in colour, finely spotted with dark brown.

The Yellow Wagtail can easily be recognised by its colour. It is not so dependent upon water as its field relative, and is apt to associate in little troops.

In many a lane and garden we may see a pretty sight, if we remain perfectly quiet. Something that looks like a little brown mouse may be seen running quickly up the trunk, but showing that it is not a mouse by flitting from one tree to another.

This is the common CREEPER (*Cérthia familiaris*), and a very pretty little creature it is. Like the titmice, it lives almost wholly on the insects which it finds in crevices either of trees or walls, and can traverse the one as easily as the other.

Unlike the titmice, it does not get at the insects by pecking away their hiding-places, but extracts them by means of its long, sharp, and curved beak, which looks

very much like a cobbler's awl. In order to allow it to pass quickly over the trunks, its claws are very long, very slight, and very sharp, so that if you take a dead creeper (which I hope that you will never have the



TREE CREEPER.

opportunity of doing), and place the claws on the tree, as the living bird would do, the body will remain hanging to the bark. It will droop backwards, but it will not fall.

For a series of years I occupied a room, opposite the windows of which were some elm-trees, situated

only a few yards from the house. The creepers were perpetually on the trees, and very soon learned that, though my windows were open, they would not be disturbed.

At first, they used to follow their usual plan of dodging round the trunk, just as squirrels do when alarmed, but soon finding out that they would not be injured, they allowed themselves to be watched without betraying the least alarm. This, indeed, is generally the case with our small birds; and if the observer should possess a small opera-glass, he can easily see even the glitter of the eye, and the changing lights and shadows of the plumage.

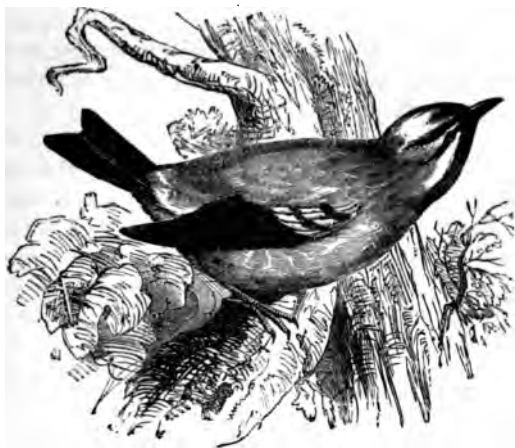
Common as is the creeper, I always had very bad success in finding the nest, which is made in the hollows of old trees, and contains seven or eight little grey eggs spotted with brown.

Least of our lane birds comes the GOLDEN-CRESTED WREN (*Régulus cristátus*). Tiniest of our British birds, it is one of the prettiest, and its crown of golden feathers is all the more beautiful by its contrast with the browns and whites of its plumage generally.

It is a great frequenter of lanes which border upon gardens, and is singularly serviceable to the fruit-grower, discovering and eating the minute insects which hide in the crevices of the bank, and which, small as they may be, can do no little harm to the right development of the fruit.

The nest is quite as beautifully made as that of the humming-bird, and is always sheltered under some leaves, so that it is not easily to be found. I have found the nest thus sheltered beneath a bunch of

fir-cones, which made an admirable roof, and served for concealment as well as shelter.



GOLD-CREST.

There is a very similar bird called the FIRE-CREST (*Régulus ignicapillus*), which has the crest of a fiery orange, a ruddy forehead, and a yellow gloss on the sides of the neck. It is not so plentiful as the Gold-crest.

As to the REDBREAST (*Erýthacus rubécula*), it is so ubiquitous that it cannot be said to belong either to lanes, fields, or forests. In this country it has learned to prefer the neighbourhood of man, knowing, perhaps, that it will not be injured.

No bird is easier to tame, after a fashion ; but although it will freely enter the house, and even

build its large, clumsy, untidy nest in inhabited rooms, it cannot endure confinement in a cage.

The worst point about a tame Redbreast is its insane jealousy of other pets. It will take possession of a room, consider itself as master, and fight to the death against any other bird, no matter how large, that may attempt to enter.

At liberty, it often builds its nest in the lane, near the ground, especially if there are old decayed stumps covered thickly with ivy. In the nest are generally five eggs, greyish-white, spotted with red. They are, however, extremely variable in number and colour, and the most singular example of this variation lately came under my notice. A Redbreast's nest was found in a little wood close to my house, and in it were found ten eggs, five of the ordinary type, and five pure white.

CHAPTER IV.

BIRDS OF THE FIELD.

The Crow—Why called “Carrion” Crow—Places where it may find carrion—Winter food—Acorn planting—Unsociable habits—The Crow a monogamist—Its ordinary food—Nesting of the Crow—Deserted nests—The Rook—How distinguished from the Crow—White patch on beak—Food of the Rook—Ploughmen and Rooks—Enacting the ploughman—Grubs and Worms—Gulls and Rooks—Wireworms—Rookeries—The Starling, and its uses to man—Cattle and Flies—Social habits—Flocks of Starlings, and their discipline—Sleeping-places of the Starling—An alarm by night—Grubs of the Daddy Long-legs—Colours and nesting-places of the Starling—The Skylark essentially a bird of the field—Caged Skylarks—Violated instincts—Its early song—Nest of the Skylark—Its food, and use to man—The Wryneck, Cuckoo’s Knave, or Snake-bird—Its cry, and mode of imitating it—How the bird obtains its insect prey—Nest and eggs—The Cuckoo—Its aspect and flight—Legends respecting the Cuckoo—How the eggs are laid—Expulsion of the rightful inmates.—Waterton’s opinion—Song of the Cuckoo, and cracking of voice.

“THE Crow, the Crow, the great black Crow.”

Why is it called the carrion crow? Did it depend on carrion for a livelihood it would make but short stay in such a country as this, where dead animals are never to be found, except, perhaps, the

dogs and cats drowned in rivers. On these it certainly does feed, as any one may see who walks along the banks of the Thames, Medway, or any such stream.

But there are thousands of crows in England which may be seen in fields throughout nearly the whole year, only being driven to the sea-shore or river-bank by an exceptionally severe winter. The name was probably given to it in the times when



CROW.

refuse animal substances were plentiful, and the crow performed the office of scavenger. Now-a-days,

in the autumn time, the crow is a great eater of acorns, burying them in the ground here and there for future store, sometimes forgetting them, and so unconsciously planting future oaks.

It is not a sociable bird. It will feed in the same field with the rook, but does not associate with that bird, nor even with its own kinsfolk, and, like the raven, is mostly seen in pairs. For, evil as may be its reputation in other respects, it only has a single mate, and is faithful to her as long as she lives.

As to its food, it will eat almost anything, but has a special liking for rats, mice, lizards, very young rabbits, the eggs of other birds, and similar food of an animal character. Though its nest is much like that of the rook, and is similarly placed on the top of a high tree, it disguises it much better. Mr. Waterton remarks, in one of his essays, that a pair of crows once built in a small copse, which a number of rooks selected for themselves. The crows went off and sought another domicile, but the rooks having been ejected, they returned to their former residence. Kestrels often build in the deserted nests of crows.

The scientific name of this bird is *Corvus coróné*.

Very like the crow is the Rook (*Corvus frugilegus*). Its bareness is natural, and not, as was long supposed, owing to friction against the ground while the bird is burrowing for food. The crow subjects its beak to equal friction, and yet no white patch shows itself.

Mr. Waterton proved the point conclusively by keeping a nestling rook in a cage, where it could not

thrust its beak into the ground, but where the white patch appeared just as if the bird had been at liberty.

It is not often that scientific names are based on errors, but this is the case with the rook, whose specific name of *frugilegus*, or fruit-picker, was given to it because it was supposed to feed upon the wheat and other crops. Ploughmen, perhaps, might have known better, but, as a rule, ploughmen are not generally of the type of Burns, who could write



ROOK.

beautifully on a field-mouse turned out of her nest by the share, or a daisy uprooted by it.

Few, however, except ploughmen, have much

chance of seeing rooks at close quarters. Perhaps, if an enthusiastic naturalist wished to study the habits of the rook, the best plan would be to dress like a ploughman, and guide a plough himself. But, in the first place, guiding a plough is no easy task ; and, in the next, the land would be quite spoiled by the erratic course of a ploughshare in unaccustomed hands ; and, unless he happened to be the owner of the land, he would hardly get a second chance of trying the experiment.

Merely dressing like Hodge, and pretending to be a ploughman, will not deceive the rook, which, like the rat, although it haunts the neighbourhood of man, and is in many respects quite fearless of him, takes care to keep out of his way when he is likely to harm it.

The next best plan is to procure a good telescope, find a hiding-place as near the field as possible, and then watch the rooks. They will be seen to follow the ploughman as closely as a bulldog follows at his master's heels, picking up the worms and grubs which are turned up by the share. Very often, especially within a few miles of the coast, gulls will come inland at ploughing time to gain a subsistence from the meadow, just as the crows fly seaward in winter to gain a subsistence from the shore.

The vegetable substances thrown up by the plough have no allurements for the rook, but the bird feeds greedily on the grubs and worms, which might work much mischief to the crop. Every one has heard of the wire-worm, and of the frightful havoc which it can work unseen. The rook, however, has a great

taste for these destructive beings, and, in ninety cases out of a hundred, where it is thought to be devouring the wheat-roots, it is eating the wire-worms by the hundred.

Then, it has a great fancy for the fat, white, fleshy grub of the cockchafer, also an unseen foe, which remains buried in the earth for two or three years ; the grubs, indeed, have sometimes been so numerous that they have been gathered by the bushel, and a tolerably useful oil expressed from them. As to rookeries, every one is so familiar with them that they need no description, and I am now only regarding the rook as a bird of the field.

How sociable the rooks are in their habits, and how far they will fly to and from their feeding-places is well known ; but in numbers, in sociability, and in flight, they are far surpassed by the STARLING (*Sturnus vulgaris*).

As to numbers, where you can see ten rooks you will see a hundred or more starlings, often feeding amicably in the same field. They are wonderfully bold when searching after food, and may be seen by hundreds perching on the backs of sheep and picking the ticks from beneath their wool. The sheep never disturb them, and the cows are equally glad to welcome the starling, which helps to rid them of the troublesome flies, which can drive even the tough-skinned cattle half mad with pain.

There never was a more sociable bird than the starling, which does not seem happy unless associated with its comrades. As for the flocks of these birds that sometimes assemble, their multitudes are simply

incalculable ; and even the ox-bird of the sea-shore must yield in this respect to the starling.



STARLING.

Fenny counties, such as Lincolnshire, are the favourite resorts of the starling, where the birds associate, not so much in flocks as in clouds. It is most interesting to watch them taking their evening flights, when they have returned from their feeding-places, and are going to settle for the night. This they can

never do without a preliminary flight in company, and most wonderful this flight is.

A single flock will consist of countless thousands of birds, and the whole vast body seems to be actuated by one spirit. They advance, retire, wheel to the right or left, rise or fall, fly in mass or column, as regularly as a regiment of perfectly-drilled soldiers. There is nothing more wonderful than to see a vast mass of starlings, which look like a black cloud darkening the sky, suddenly change their course, present the edges of their wings to the spectator, and become almost invisible.

How this is done no one knows. They certainly have no acknowledged leader, and yet the single will is flashed through the whole body of birds, as if by electric telegraph.

If the observer can hide himself near their roosting-places, he will be amused with the noisy, busy scene. The chatter which they make as they are settling is perfectly deafening ; and, then, just when they seem to have hushed their voices, and fairly settled, off they dart with a rush, and take another flight.

Within a mile of my house there is a favourite sleeping-place of the starlings, and I have often amused my friends by taking them quietly to the spot, and then flinging a stone among the birds. It is like throwing a lighted match into a powder-magazine. Up flies a black cloud of birds, with a vast rush of wings, and a chorus of wild cries, which is almost alarming. However, they soon think that they have taken flight needlessly, and disappear again in their resting-place.

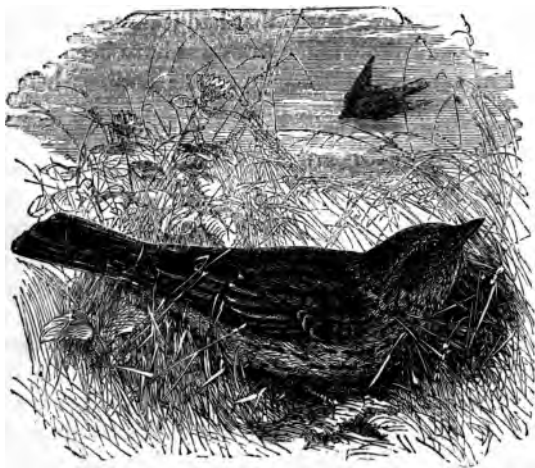
Plentiful as are these birds, I wish they could be multiplied tenfold. They do not suck eggs, they do not turn pigeons out of their cotes, they do not injure the crops, but they do devour myriads of insects, which are injurious to man. Especially are they assiduous in destroying the grubs of the Daddy Long-legs (*Tipula*), which live under grass, eat the roots, and, unless their numbers are thinned, utterly kill the grass. A croquet-lawn in my own garden was so infested with these pests, that had it not been for the starlings, the whole of the turf must have been ruined. But at early dawn there were the starlings hard at work. I used to watch them with a telescope, and a very amusing sight it was.

These soft-bodied, horny-headed grubs live under ground in an almost perpendicular attitude, so that the insect may escape into the outer world when fully developed. The starlings invariably seized them by the head, and dragged them out with exactly the sort of twist that a dentist gives when extracting a tooth. They then flew off to their nests, holding the grub still by the head, and were soon back again in search for more. As a much-frequented lane ran by the side of the garden, the starlings ceased their labours on the lawn as soon as the farmers' carts began to pass.

The beautiful colours of this bird belong only to the male, and are not developed until he is at least three years old. Females and immature males can scarcely be distinguished from each other. I regret to part with the starling, as it is a special favourite of mine, but the exigencies of space forbid further description. I must, however, add that the starling is

not at all particular as to the place of its nest. It will breed in any sheltered situation, preferring holes in rocks, old buildings, trees, and similar localities. It is such a noisy bird that its nest may easily be found, and in it are generally five eggs, of extremely pale blue.

No bird belongs more essentially to the field than the SKYLARK (*Alauda arvensis*). Out of the field it



SKYLARK.

is out of its place, and is never so much out of place as in a cage. I can never see a caged Skylark without yearning to set it at liberty, and I wish that our laws would prohibit this kind of cruelty as well as several others which are more obtrusive.

It is but lately that we have prohibited dog and

cock fighting on the score of cruelty, but these pursuits are not half as cruel as the caging of Larks. Both bulldogs and cocks, especially the latter, are instinctive fighters, and in encouraging them to fight we only encourage their instincts. But when we imprison a Skylark in a cage, we absolutely torture it by checking its instincts by sheer force. Were those instincts ferocious, like those of the dog and cock, we might be justified in repressing them.

I did, after many attempts, succeed in teaching a bull-dog to repress his combative instinct, and in this I believe myself right. But the instinct of the Lark is to soar upwards as it sings. Its song is framed to float in the air, and for that higher air the Lark is always longing. To confine that bright songster within the limits of a cage is utter cruelty, and if I had my way every caged Lark should be set free in the fields in summer time, and a heavy penalty imposed on any one who should afterwards imprison a Lark in a cage.

Of course, I am not speaking of scientific ornithologists, who must keep the bird in captivity if they wish to observe its peculiarities. But I do appeal to those who keep birds for their song, not to include the Skylark. There is the canary, which, if properly taught while young, will sing the nightingale's song, and transmit the melody to its successors. I once completely changed the character of my canaries by purchasing a good cock bird with the nightingale's song, placing him in the aviary, and removing the other cock birds. And there are many other singing birds which can easily be tamed.

and which will cheer their hearers with melody, without having their harmless, and even beautiful, instincts violated.

Scarcely any birds are so determined and so lasting in their songs as the Skylark. It begins at the earliest dawn, and sings until late in the evening. It is heard in the earliest spring, and almost as soon as the snow is off the ground the Skylark is aloft in the full tide of song. Thus it continues to sing throughout the whole of the summer, and far into the autumn.

Field bird as it is, the Skylark has its nest in the field. It is as simple a nest as may be, and is always made on the ground, in some little hollow, which serves to conceal it. Finding the nest is not an easy task, and even though there may be a dozen Skylarks singing over a single field, and dropping occasionally to the ground, the nests cannot be traced by these means. The bird never drops upon its nest, but always alights at some little distance, and then makes its way almost unseen along the ground.

The eggs are five in number, and are brown and speckled, so that they are not at all conspicuous, even if the parent bird be absent. Being chiefly an insect-eating bird, it deserves protection for the sake of the services which it renders to man in the destruction of noxious insects, if not for the more sentimental claims on the score of its voice.

Oftener heard than seen, the WRYNECK (*Yunx torquilla*), announces its presence by the strange notes which it almost ceaselessly utters during the first few months of spring. It nearly always begins its cry a few weeks before the cuckoo's note is heard.

and is, therefore, known in many places as the Cuckoo's Knave, *i.e.* servant.



WRYNECK.

Any one who wishes to see the Wryneck can easily do so. Let him go to any field where are hedges and trees, and put into his pocket the classical instrument composed of a comb and tissue paper. Then, by means of this instrument, let him utter the syllable tet-tet-tet-tet, sharply and shrilly, making the sound resemble the voice of Punch as nearly as possible, and going on as long as he can find breath.

Should there be a Wryneck within hearing, it will be sure to answer the call by his own challenge note, and become so excited at the audacity of his supposed foe, that he will come almost close enough to be knocked down with a stick. Wryneck calls can be purchased at the bird-shops, but I have found the comb and paper quite as effective.

This bird is an insect-feeder, catching the tiny creatures that frequent the crevices of banks, and capturing them not so much with its beak as with its tongue, which is very long, and can be darted out to a wonderful distance by means of a structure exactly like that of the woodpeckers. The name of Wryneck is given to it on account of its habit of twisting its head and neck while searching for prey. In some parts of the country it goes by the name of the Snake Bird.

The eggs are laid in some convenient hollow, generally a hole in a decaying tree, and though the Wryneck is no nest-builder, it will take possession of the deserted nest of a wren or other bird, provided that it be in a suitable locality. The eggs are seven or more in number, and of a pinky-white in colour, changing to a porcelain-white when blown.

After the Cuckoo's servant, of course, comes the Cuckoo itself (*Cuculus canorus*).

The song of the Cuckoo is too familiar to need description, but as it is easily imitated, especially by boys, it is not easy to know exactly when the first Cuckoo of the year is heard. Plentiful as is the bird, it is often seen without being recognized, for it is so hawk-like in form and flight that it is often mistaken for a kestrel or sparrow-hawk.

Every one knows that the Cuckoo deposits her eggs in the nests of other birds, those of the hedge-sparrow having the preference. It is curious that the bird should not distinguish the mottled-grey egg of the Cuckoo from its own beautiful blue eggs, but such is the fact.



CUCKOO.

Four Cuckoo's eggs were found in one year within a few yards of my house, and all were laid in the nests of the hedge-sparrow. One was found on a Friday, and taken out of the nest; and on the following Monday another egg was deposited in the nest, pos-

sibly by the same bird. The other two eggs were found in different nests.

We all know that this is done, but we do not know how it is done, for no one has been able to ascertain definitely whether the Cuckoo lays the eggs in the nest during the absence of the parent bird, or whether she deposits the eggs on the ground and then removes them to a convenient nest.

We all know that the hedge-sparrow lays five eggs, which as a rule are all hatched and reared, but that when a Cuckoo has deposited her egg in the nest, only the single young bird is reared. But how the genuine eggs and young of the hedge-sparrow disappear from the nest is not known. Dr. Jenner's account of the early history of the Cuckoo is very familiar, and has generally been accepted. Waterton, however, flatly contradicted it, and his reasoning is too sound not to have very great weight.

Jenner said that the young Cuckoo on the day that it was hatched carried the young hedge-sparrows to the edge of the nest, and dropped them on the ground. "No bird in creation," writes Waterton, "could perform such an astounding feat under such embarrassing circumstances. The young Cuckoo cannot by any means support its own weight during the first day of its existence. Of course, I believe it is utterly incapable of clambering, rump foremost, up the steep side of a hedge-sparrow's nest, with the additional weight of a young hedge-sparrow on its back."

So we have much to learn about the history of the Cuckoo. Perhaps some reader of this little book may have an opportunity of discovering these mysteries,

but as Waterton, with all his advantages, was obliged to confess himself baffled, there seems little hope of the discovery being made, except by accident.

Like other birds, the male Cuckoo is the songster, and he only sings during the breeding season, his voice cracking wofully towards the end of June, becoming worse in July, and failing altogether in August.

CHAPTER V.

BIRDS OF THE FIELD—(*concluded*).

The Nightingale—Shakspeare caught tripping—Character of the song—Singing by day as well as by night—Favourite singing-places—Individuality of the song—Boldness of the Nightingale—Its nest and eggs—Migration—Simultaneous arrival—The Goldfinch and its beauty—Its services to man—Goldfinches in the field—Food in spring and summer—Nest and eggs of the Goldfinch—The Redstart and its plumage—Nesting, and pretty eggs—Food of the Redstart—The Hedge-sparrow or Dicky Dunnock—Its nest and eggs—Cuckoos and Redstarts—Song of the Hedge-sparrow—The Barn Owl, its food, and services to man—Contents of the “pellets.”—Waterton and the Owls—The Eared Owl and its feather tufts—The Brown Owl—Its food and nest—The Nightjar—Erroneous ideas about the bird—Night singing—Its foreign relatives—Peculiar song—Boldness of the Nightjar—Mode of catching prey—Strange method of perching.

KING of songsters though he be, the Nightingale (*Luscinia Philoméla*), can receive but a short notice. I was for some time doubtful whether the Nightingale should be classed as a bird of the lane or the field, for in some parts of England, notably in Kent, there is scarcely a lane or a field-hedge from which the Nightingale does not pour out its song. I have, however, determined the question by the nest. Although the Nightingale is one of the boldest of birds, and will sing in the lane, I know personally of no instance

where it has made its nest there. I have found the nest within a few yards of a footpath, but not actually in a lane.

It is not often that we can catch Shakespeare tripping as a field naturalist, but he has fallen into one or two popular errors concerning the bird. The first is, that the female bird is the songster, and that her song is one of sorrow. Whereas, the singer is the male bird, and the song is as buoyantly exulting as that of the lark. The bird revels in his own powers of song, and challenges all his neighbours to a competition of their powers.

In fact, the sweetest and most wonderful notes of the Nightingale are never heard except by those who know how to hold converse with the bird, and can excite it by repeated challenges until it is almost beside itself with vocal rage.

The second error is that of supposing that the song of the Nightingale owes its sweetness to the silence and darkness of night.

“I think

The nightingale, if she should sing by day,
When every goose is cackling, would be thought
No better a musician than the wren.”

In point of fact, the Nightingale sings almost as often and quite as well by day as it does by night. I have often, when town friends have visited me and wished to hear the Nightingale, taken them to the haunts of the birds, and induced the Nightingales to sing for their benefit.

Each bird seems to take a fancy to some particular spot, and almost invariably has a favourite tree in

which it will sing. One nightingale actually chose the top of a small weeping ash just under my window, although three public roads ran within a few yards of it; there was incessant noise, day and night, from the roads, steamers' whistles, and stone wharfs, and the tree on which it sat was commanded by more than a hundred windows. There is as great an individuality in the voices of Nightingales as in those of human beings, and I have found, after carefully watching the birds for more than ten years, that there is always one champion singer, and that when he lifts up his voice his inferiors cease their song.

Only one fault can be found with the song of the Nightingale. There is so little of it, and only for a few weeks is it heard in full perfection. When spring is entering into summer the Nightingales sing less freely, and do not answer a challenge with their accustomed spirit, and then those who are learned in their ways know what is coming. The high, sweet, liquid trill ceases, the voice soon loses its delicious brightness, the round, perfect notes begin to crack, and then the bird ceases to sing altogether.

I have already mentioned the boldness of the Nightingale. It will not only sing in gardens close to the windows of the house, but will actually make its nest close to the railway. I know a beautiful dell which had once been a chalk-pit, but which has long been abandoned and is covered with underwood and various wild plants. Through the middle of the dell passes a railway, and yet, despite the constant traffic, there are numbers of Nightingale nests on both sides of the road, and during the season of song the voices

of the Nightingales can be heard even above the rattle and roar of the train. The very simple nest of the Nightingale is placed almost, if not quite, on the ground, and the eggs are five in number, very smooth, and of a peculiar olive-brown.

I need hardly say that it is a migratory bird, but it stands almost alone among migratory birds in the regularity of its arrival. The date of its departure is not easily to be ascertained, as the bird is out of song for some time previously. But there can be no doubt about its arrival, which is at once announced by its song. And it is a curious fact that the Nightingales, certainly the male birds, appear to arrive simultaneously. On one evening, for instance, not a Nightingale can be heard, and as no answer will be given to a challenge-note it is evident that none is near. Next evening the country will be filled with melody, the Nightingales challenging and answering in all directions, and pouring out their songs in fierce rivalry.

As far as I can learn, no one has ever seen the birds arrive, but there they are, and almost always within a day or two of the same time of year. Like the swallows, they appear to select the same nesting-place year after year. There was one special Nightingale who had a nest about five hundred yards from my house. His note could not be mistaken by any one with a musical ear, and for a series of seasons the same bird came and sang in the same tree. One year, on detecting the first Nightingales, I went off to the tree and gave the challenge-note, expecting my friend. It was not answered, and I never heard his unrivalled song again.

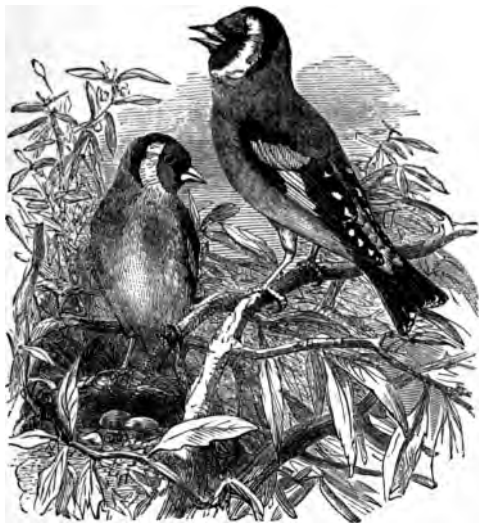
BRILLIANTLY-COLOURED birds are rare in England, but we have a few of them, and one of the prettiest is the Goldfinch (*Fringilla carduelis*), whose plumage is glorious with crimson, yellow, black, and white, those colours being very much more vivid in the male than in the female. A bright crimson band runs round the base of the beak, the sides of the face are white, and the top of the head is capped with deep black, a narrow band of the same hue running along the sides of the neck. The rest of the plumage is brown, black, and white.

It is as useful as it is pretty. Not even the market-gardeners, who rejoice in sparrow-clubs and think that every little bird is an enemy to their crops, have much to say against the Goldfinch. It certainly does come into the gardens, but in the early part of the year it is so clearly an insect-eater that they do not trouble themselves about it, although they persecute the chaffinches and bullfinches relentlessly.

If any one wishes to see the goldfinches at their best he should go into the fields on a fine day towards the end of summer, when a smart breeze is blowing. Then, the winged seeds of the thistles, burdocks, groundsel, &c., are whirled through the air like the flakes of a snow-storm, and with the flying seeds are whole flocks of goldfinches, catching their food on the wing, and so eagerly intent on their pursuit that they allow themselves to be blown about almost as vaguely as the seeds.

The best plan for seeing these pretty birds when thus engaged, is to find a tolerably large field in which thistles are plentifully growing, and take a

seat in a hedge which faces the wind. If the observer will only sit quite still the goldfinches will never notice him, even if they pass within a yard of him.



GOLDFINCH.

They will settle on a thistle in front of him, pull out the downy seeds, and fly off to another without taking the least alarm.

In fact, all wild animals appear to be scared by the movements of man more than by his actual presence. Even the proverbially cunning fox, and the no less cunning weasel will pass by close to seated man, and if he only remain quiet, will not detect him unless they be to leeward of him. Then they are sure

to take the alarm, but it is through the nostril, and not the eye.

The nest of the Goldfinch is nearly as pretty as that of the chaffinch, but is not placed in a similar position. Instead of being lodged in the junction of the branch with the trunk, it is usually placed at the end of a horizontal branch, and is wonderfully well concealed. The oak seems to be a favourite tree with the bird, and I have more than once when beating the oak for insects discovered the Goldfinch's nest by finding an egg or two in my net. As is usual with all these birds, the eggs are five in number, and they are nearly white, prettily spotted, and streaked with purple brown.

In the early summer, it is hardly possible to walk along the lane without seeing a bird dart out of the hedge, fly a few yards forwards, and dart again among the foliage. Just as it turns into the hedge, it shows a patch of red upon the tail and the lower part of the back. Those little flights it will repeat for some time, much after the fashion of the red-backed shrike, but the two birds can never be mistaken for each other. This is the REDSTART (*Ruticilla phænicea*), which well deserves its name, not only for the ruddy hue of its plumage, but for the habit of starting suddenly out of the hedge in which it has been sitting.

It is one of the most plentiful of our small birds, and must be familiar to all who have been in the habit of walking in the fields. The male bird is really a pretty one, and cannot be mistaken. The greater part of the tail and lower portion of the back are bright, ruddy chestnut. The rest of the back and the

top of the head are bluish grey, the wings are dark brown, and the neck and throat are jetty black.

The nest of the Redstart is almost always made in the holes of rocks or in large stone-heaps, and in de-



REDSTART.

fault of these nesting-places it will build in the hole of an old wall. There is little difficulty in finding the nest, for the bird is a very bold one, and makes no attempt at concealment. It will build even in inhabited premises, and will allow itself to be inspected when sitting on its eggs without displaying the least alarm. The eggs are five in number, almost exactly resembling those of the hedge-sparrow in colour, but smaller, and more slender. As to its food, it consists almost exclusively of insects, which the bird is very clever in

detecting. Perhaps the reader may be aware that many species of fly are bred in fungus, the larvæ being little white grubs that lurk unseen within the soft substance. The Redstart, however, finds them out, pecks away the fungus, and eats the grubs.

That it is sometimes rather destructive among fruit cannot be denied, but it does such good service in insect-eating during the earlier part of the year that it may be pardoned for eating a little fruit in winter.

We cannot part with our little birds of the field without a brief mention of the HEDGE-SPARROW (*Accentor modularius*).

It seems to be extremely plentiful in all parts of England, and in consequence has various local names, one of which "Dicky Dunnock," is prevalent through the northern parts of England.

Being so common, and making its nest in almost every hedge, its pretty blue eggs are too plentiful for any egg-fancier to care about. Still, no experienced egg-hunter ever passes a Hedge-sparrow's nest without looking into it, as he may possibly find an egg of the cuckoo.

The nest being so conspicuous, and the blue eggs so unlike those of the cuckoo, it seems passing strange that the cuckoo should choose such a resting-place for her eggs. Cuckoo's eggs have also been found in the nests of blackbirds, wagtails, pipits, and several other small birds, but the chief favourite is the Hedge-sparrow, and for one cuckoo's egg found in the nests of finches and other small birds, twenty will be found in those of the Hedge-sparrow.

Being one of the warblers, it has a song, and a very

pretty one, though rather feeble, and not much more forcible than that of the redbreast or wren.

It is a pretty little bird, though plainly coloured, its general hues being warm brown above, and greyish white below. Sometimes it takes up its abode in towns, where the smoke besmirches its plumage, and destroys the bright hues of the country bird.

Night must be represented as well as day, and we



BARN-OWL.

must devote a short space to two birds of night, both of which have been, and are still, objects of superstition, not only in other countries, but in England. The first is the OWL. There are several English Owls, but the best known is the WHITE, or BARN-OWL (*Strix flammea*), sometimes called from its voice, the Screech-

owl. Though, as a rule, it only comes out by night to hunt for prey, it will sometimes search for mice in full daylight. Mr. Waterton repeatedly saw it do so, and even at midsummer while the sun was shining brightly, the Owls were hawking after mice. It has even been seen to drop into the water upon fish, secure one and carry it off to its nest. Eels seem always to be killed by a bite on the back of the neck.

Perhaps they may have acquired boldness by their residence in Walton Park, where no bird was allowed to be destroyed. It is true that now and then a solitary Owl may be seen straying in the fields during the daytime, but it leads a wretched life, being followed and scolded by the little birds, which are horribly afraid of it, but cannot refrain from mobbing it. When I was quite a boy I read Waterton's admirable essay upon the British Owls, and have always had a liking for the birds, knowing the inestimable services which they render to man in the capture of rats and mice. There can be no doubt about the nature of their food.

In common with the hawk tribes, the Owls always reject the indigestible parts of their food, and the "pellets," as they are called, soon dry, and then form a soft bed for the eggs and young birds. Consequently, the smell of an Owl's nest is anything but fragrant.

Nothing is easier than to procure specimens of these pellets, and to examine them. I have often done so, and have found that the chief bulk of pellet was composed of bones and skins of mice, and the hard remnants of insects ; especially those, which,

like the ground Beetles, mostly hide by day, and come out by night. Now and then the bones of small birds may be found ; but, as a rule, mice and insects compose the food of the owl.

Strangely noiseless is the owl's flight. Most birds, when passing so rapidly through the air, as the owl is often obliged to do, produce a rushing sound, more or less loud. But, the owl seems to drift as noiselessly as a snowflake, the soft, downy plumage giving no more resistance to the atmosphere than does an ostrich-plume.

If kindly treated, the owl will take up its dwelling close to the habitations of man. Mr. Waterton had several owl-houses in his park. Some were made in hollow tree-trunks, some in artificial structures expressly made to suit the birds, and one of the best was formed in the old gateway in front of the house on the stone island in the lake.

One of these bird-houses was made in a large oak-stump, and in it were found at one time a barn-owl's nest containing young, several dead mice, and a dead rat ; a jackdaw's nest with five eggs ; and a redstart's nest with six eggs. It was evident that neither the jackdaw nor the redstart had cause to fear the owl, for the nests were close together, and the owl had clearly let the other birds alone.

As to the nest of the owl, it makes none, but, as I have before said, deposits its eggs and rears its young on a soft bed of pellets, very repulsive to the nostrils of man, but evidently pleasing to those of the owl. There is no accounting for tastes, which providentially are modified by surrounding conditions.

There is no doubt about the owl's nest, for the touch of the eggs is sufficient identification. They are much more round than oval, and are curiously rough on the surface, just as if they had been sprinkled with imperfectly pounded chalk.

Besides the barn-owl, which is nearly white, speckled with brown and black, there are several owls of a brown colour. One of them is the common EARED OWL (*Otus vulgaris*), which has derived its popular name from the two feathered tufts which decorate the head, and which really look very much like ears when they are erected. It is not, however, very easy to see them, for if the owl be startled, down go the feather-tufts close to the head, and then the bird looks almost exactly like the Brown Owl, which has no tufts.

Then, there is the BROWN, or HOOTING OWL (*Syrnium Aluco*), which, as its name imports, is distinguished both by its note and colour from the barn-owl.

It seems to be a stronger and fiercer bird than the barn-owl, and to feed its young with larger prey. It has even been known to attack the nest of that redoubtable fighter, the magpie, and after several attempts, to kill and carry off both old and young birds to its nest. Snails and slugs, insects, various birds, rats, mice, moles, and even fish, form its nutriment, so that it is a very excellent friend to the agriculturist, and deserves all the protection and encouragement which it can receive.

Our second bird of night is the common NIGHTJAR (*Caprimulgus Europæus*), sometimes called the Goat-Sucker, and sometimes the Fern Owl. Only the first

of these popular names is a correct one ; the second is entirely absurd, and the last scarcely less so.

It is really wonderful how an error, no matter how gross, can be perpetuated through a series, not only of years, but centuries. I do not know whether any one, however ignorant, believes that the Nightjar sucks goats, but the scarcely less ridiculous notion that hedgehogs and snakes suck cows, is still prevalent in country villages ; as is the rooted idea that newts spit fire, and that their bite is death.

Again, except that the bird is a night-flier, and has soft brown plumage, there is no reason that it should be called an owl, while it certainly has no particular love for ferns, preferring a mixture of field and trees to fern.

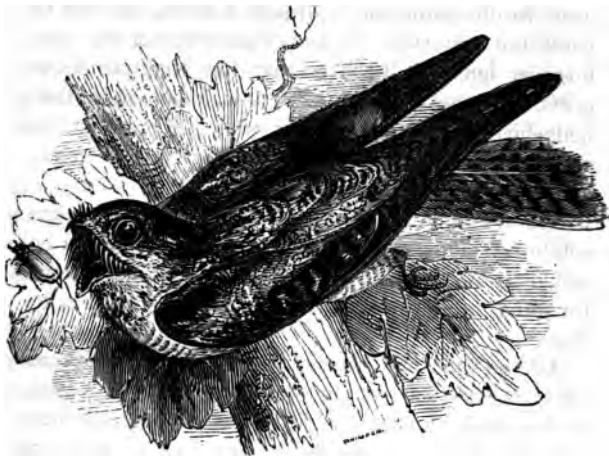
All the tribe are remarkable for their voices, and every species has its particular cry, in many cases having almost a human articulation. The celebrated Whip-poor-Will is one of them ; as is the Chuck-Will's-Widow, so is the Willy-come-go, and so is the dreaded Jumby bird of the West Indies.

Our own species has its own cry, which has gained for the bird the popular name of Churr-Owl, or Churn-Owl. Once heard, it can never be mistaken for any other sound, though it can hardly be described by words. And there is the less difficulty in distinguishing it because it is never heard except by night.

It does not sound like the song of a bird. It is a harsh, vibrating, jarring sound, not altering the note, but increasing and decreasing in loudness, and seeming almost interminable. How the bird manages to find breath for so prolonged a cry seems a mystery,

but it goes on and on, becoming piano or forte by turns, but not ceasing.

Why the nightjar should have so evil a reputation, is not easy to understand, for few birds are more



NIGHTJAR.

useful. It is exclusively an insect-eater; and the number of cockchafers which it will catch is almost incredible.

It is a bold bird, and in search of prey will pass close to the observer. Generally, when it rests, it chooses the branch of a tree; but I have known it to settle on the ground within a few yards of me. What it was doing I could not see, on account of the darkness, but I think that it must have been engaged in the capture of some insect which its eyes, formed for night, could see, though mine could

not. The flight is as peculiar as the note, and is not unlike that of the bat. The bird hurls itself through the air, so to speak, wheeling and turning with wonderful ease, and capturing as it passes, the nocturnal insects which are on the wing. In order to aid it in these captures, its mouth is enormously wide, and is edged with long bristles, forming a sort of net through which an insect cannot pass if once inside. The bristles are called "vibrissæ."

The use of this structure is evident enough, but it leads us to ask ourselves a question which cannot be hastily answered. Why should the Nightjar require the enormously wide mouth and the vibrissæ, while the bats, which live on the same description of food, and are also night-fliers, have comparatively small mouths, and require no vibrissæ at all?

Bold as is the bird, and so fearless of man that it will allow him to approach close to the tree on which it is singing, yet few birds are more difficult to be seen. The voice may seem sufficient to guide the eye, but, setting aside the imperfect light, the nightjar is almost concealed by its mode of perching. Nearly all birds perch crosswise on the bough, but the nightjar sits in line with the bough, and will sometimes sing for some time within a few yards of an observer, and only betray itself when it takes to flight. It builds no nest, but lays a couple of grey speckled eggs on the bare ground; and it is as difficult to find the eggs on the ground as it is to see the parent bird on a bough. One of these eggs was found at the foot of an oak-tree within a few yards of my house.

CHAPTER VI.

REPTILES OF THE FIELD AND LANE.

Lizards—The Scaly Lizard—Where to find it—Quickness of its movements—How to watch the Lizards—Catching a Lizard—Lizards in captivity—Lizards in water—The Sand Lizard and its habits—Legless Lizards—The Blindworm—Errors regarding it—Habits of the Blindworm—Fragility of the body—A tame Blindworm and her family—Food of the Blindworm—Snakes—The Ringed Snake and its habits—Food—How a snake eats a frog—Structure of the jaws—Expansive skin—Demeanour of the frog—Its cry of alarm. Localities of the snake—A young Snake-catcher—Tame Snakes—Snake nests—Egg-strings—The Viper and its habits—How to distinguish it—Poison-fangs—Their structure, and mode of using them—Food of the Viper—Are Vipers to be killed?—Effects of the poison.

WE have but very few reptiles in England, and, fortunately, only one of them is capable of doing any harm, and is as shy and timid as it is poisonous.

Be it, in the first place, understood that neither frogs, toads, nor newts are true reptiles, and as they are wholly aquatic in some of their stages of existence and totally so in others, they belong to the water, and not to the land, and so do not come within the scope of the present volume.

First of our reptiles come the Lizards, whether

they have feet or not. To discriminate between Lizards of the field and Lizards of the lane is quite impossible, for they are found alike in both localities. We will begin with the most common of these reptiles, namely, the SCALY LIZARD (*Zootoca vivipara*), which may be found on almost every bank, provided that it have a sunny aspect, for lizards are great lovers of warmth. They are easily chilled, and on cold days, especially if the wind be high, will retreat, even in



COMMON LIZARD.

the midst of summer, into their hiding-places ; moreover, there would be no use in coming abroad, for they feed entirely upon insects, which, like themselves, cannot endure cold and wind, but shelter themselves awhile until the weather changes.

So, on such days not a lizard will be seen, even in a spot which is usually frequented by them ; but, let the wind drop, the rain cease, and the sun shine warmly upon the bank, and the lizards will then be out in full force, interesting the spectator by the rapidity of their movements in search of prey.

These movements must be seen to be believed. The creature seems to have little idea of running ; it either darts, or remains motionless. To watch the pretty little creatures is quite a treat for lovers of Nature. They whisk in and out of the foliage, as if moved by springs. They pounce on flies, stop for a moment to swallow the prey, and then jerk themselves off afresh.

Many persons might pass them without noticing them, for when they dart they are so swift that the eye can hardly follow their movements, and when they are still they resemble the soil so much that they can hardly be distinguished from it.

The best plan for seeing these little creatures is to look out for a bank which seems suitable, sit down near it so as not to throw a shadow on it, and wait patiently. You may come as close as you like, if you will only keep on the side opposite the sun, and remain perfectly quiet. This last precaution is an absolute necessity. The lizard is so timid, and so watchful, that the slightest movement will scare it away.

Almost the only mode of securing the needful quietude is to be very careful in arranging a comfortable seat, and to take up such an attitude that the least turn of the head may not be required.

As to catching the lizard, it is necessarily a difficult

task. A net is sometimes used, but I always prefer the hand. Nets are apt to hitch in twigs or leaves, as the unevenness of the soil may permit the lizard to escape between the inequalities of the ground and the net.

Those who wish to catch the lizard must do so much after the manner in which flies are caught. The hand should approach the reptile with the slowest possible movement, until it is within a few inches of the animal. Then, a swift and sharp stroke should be made at the lizard, care being taken to strike a little in front of it, and if this be quickly done the lizard will be captured before it has taken alarm.

When it is caught it can be kept in captivity, and will become perfectly tame ; but it ought to be released at the end of summer, so that it may carry out its instinct of hibernation.

It is a tolerable swimmer, but I have never seen an instance where it has taken to the water of its own accord. If thrown into water it seems quite paralyzed for a moment, but soon recovers its senses, and swims rapidly to shore, thus imitating its larger relatives, the iguanas, crocodiles, and alligators.

The colour of the Common Lizard is brown above, streaked with longitudinal stripes of a darker brown, showing the under-surface orange, spotted with black in the male, and with greenish-grey in the female. This is one of the lizards which produces living young, instead of laying eggs.

Another species, the SAND LIZARD (*Lacerta agilis*) is tolerably common in most parts of England. It is exceedingly variable in colour, but it is generally

brown, diversified with rows of white spots, but many specimens have a decided green gloss. It is not quite so active as the Common Lizard, and is not so easy to keep in confinement. Still, I have received several letters from persons who have caught it alive, and kept it for a considerable time.

Now we come to a Lizard which is almost invariably thought to be a snake, because it has no legs, and the body is merged into the tail. This is the BLINDWORM or SLOW-WORM (*Anguis fragilis*), a very common, very pretty, and perfectly harmless denizen both of fields and lanes.



SLOW-WORM.

It is very remarkable that in all parts of England the Blindworm is dreaded far more than the viper, although the latter has venomous fangs, and the former has none.

We might naturally suppose that the rustic labourer, having the most frequent opportunities of observing our living creatures in a wild state, must be the best judge of their habits and quality. But there is no person so wholly ignorant of field zoology as your rustic. Observation would require thought, and the average field labourer is quite guiltless of thinking.

Without the least exaggeration I may say that thinking is an actual pain to him. We, who are accustomed to books, and whose work has been rather mental than bodily, would find our bodies aching fearfully if we ever held for a couple of hours the plough which he guides from morn to eve for many successive days. Similarly, when he is obliged to use his brains, he soon becomes quite confused and dizzy, and is tolerably sure of a severe headache. Of course, there are exceptions on both sides, but such is the usual state of the agricultural intellect.

So he does not trouble himself to think, still less to examine, and test for himself the truth of the stories which are told him. It is less troublesome to believe them, and hand them down to others.

But it is most remarkable that the same superstitions should prevail among the negroes, who certainly never heard them from the white men, and their origin is an unexplained mystery.

Should the reader wish to catch a blindworm, he will have but little difficulty. There are sure to be several in every lane or field, and he must trust to his eyes to discover them. Not being quick in their movements, like the lizards already described, they can be seized easily enough, as long as they are on a

bare piece of ground, but among the herbage they can glide away so rapidly that they are tolerably sure to escape, except from a very active hand.

If the first stroke be missed, there will be little chance of succeeding with a second. The reptile will apparently remain in the same place, jumping and twisting like a wounded snake ; but, when seized, it will be found not to be the blindworm at all, but only its tail, which will continue to coil about in its captor's hand, as if still alive, while its late owner is slipping off unobserved among the foliage.

Even if secured uninjured, it will snap off its tail should it be handled too roughly, performing this curious self-mutilation by a sudden contraction of the muscles. In process of time a new tail will grow, but it will be comparatively short, thick, and stumpy, and never will equal in appearance the long, slender, flexible tail, the place of which it has taken.

Like many lizards, the blindworm is easily tamed. I had a peculiarly tame specimen for some time, and used to feed it with small white slugs, found in the garden. Its slug-eating propensities give a clue to its nocturnal habits. As a rule, slugs are seldom seen in the daytime, but at night they may be found in profusion, as every entomologist knows to his cost, the slugs crawling over and eating the "treacles," which he had carefully laid for the capture of moths.

My blindworm knew me perfectly well, and would allow herself to be handled, and even her coiled tail to be pulled straight without being snapped off. Her length was just thirteen inches and a half.

While in my possession she produced nine little

ones. They were very pretty, yellow above, black below, and might easily be mistaken for young vipers, especially as they have wide heads, a black streak along the spine, and a black V on the top of the head.

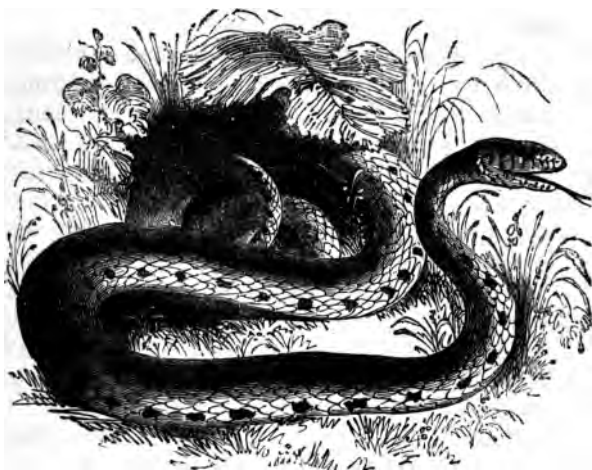
I use the name of blindworm, because it is that by which the creature is best known ; but it is anything but blind. The mole may, indeed, deserve the epithet, because its eyes are so tiny, and so deeply buried in the fur, that they are quite invisible until the fur is put aside. But the blindworm has a pair of round and very shining eyes, and, indeed, needs them when searching after prey.

If I had a fruit-garden with a wall around it, I would hunt for all the blindworms that could be found, and place them in the garden, where they would be as useful in destroying slugs as are the toads in eating insects.

Now for the Snakes. There are three British Snakes, one of which, the Coronella, is so rare that it needs no description. The commonest species is the RINGED SNAKE, or GRASS SNAKE (*Tropidonótus nátrix*), and is found in profusion both in lanes and fields. There is no danger of mistaking it for the viper, even if it be moving rapidly. In the first place, it grows to a much larger size ; in the next, it lacks the zigzag chain of black marks along the spine ; and, in the third place, it has a bright yellow patch on either side of the back of the head, this patch being too conspicuous to escape observation.

The accompanying illustration gives a fair idea of the general appearance of the Ringed Snake, though

it is not in the habit of threatening with open jaws and protruded tongue. Even a venomous snake only opens its mouth for a fraction of a second when it bites,



COMMON RINGED SNAKE.

and the harmless snakes only do so when they are swallowing their prey. But artists *will* have the open jaws and the forked tongue, and the general public is not satisfied without them. Snakes are very fond of darting out their tongues, it is true, but the jaws are hardly opened at all, the tongue gliding between the scarcely severed lips, and it must be understood that in snakes the tongue is not protruded from the back of the throat, but from the front of the lower jaw.

I need scarcely say that the tongue is perfectly

harmless in any snake, but as people still talk of the tongue as the "sting," and are horribly afraid of it, it is better to give the truth.

The head of the Ringed Snake is not very much wider than the neck, and it is covered above with large scales, as seen in the accompanying figure.



HEAD OF RINGED SNAKE.

If the jaws be opened, they will be found to possess two rows of small but sharp teeth, all set closely together, and the tips of all pointing backwards, so when the snake has once seized its prey, there is no escape for it, even when the animal is as small and slippery as is the frog, the ordinary food of the Ringed Snake.

To see for the first time a snake eat a frog is really an event never to be forgotten, the frog being several times larger than the diameter of the snake's neck, through which it has to pass.

The snake invariably catches one of the hind feet of the frog, and, undisturbed by the plunges and kicks of the animal, proceeds to swallow it. By degrees, the foot and part of the leg are seen gliding down the snake's throat, being hitched backwards by alternate movements of the little recurved teeth. At last the

whole of the leg is swallowed, but how the other leg and the rest of the body are to follow seems an inexplicable puzzle. The problem is soon solved. The frog tries to push away the snake's head with the leg which is still free, and in doing so, is sure to hitch the foot upon the teeth of the open jaw. Once caught, it cannot be freed, and the second leg follows the same fate as the first.

By this time, the head and throat of the snake have entirely lost their original appearance. The bones of the jaws are separated from each other, and are far apart. The skin of the neck is stretched so tightly over the legs of the frog that it seems almost transparent, as if it could not be stretched any further without being torn to pieces. Yet its powers of expansion seem to have no bounds. Very slowly the body of the frog follows the legs, and when the animal is almost half swallowed, the upper part of the snake's head looks like a small patch upon the frog's back, the lower jaw being on its under surface. Yet the neck of the snake withstands the strain to which it is subjected, and down goes the frog until it wholly vanishes from sight.

Then, the elasticity of the skin asserts itself, the neck contracting itself with wonderful rapidity, and the bones of the head and jaws returning to their places with exact precision.

Should the frog be a very large one, an almost ludicrous effect is produced, as its outline can easily be traced through the distended skin. And, indeed, that so large an object should have passed through so narrow a channel without tearing it to pieces, looks

more like a conjuring trick than a common event in Natural History.

I have several times seen snakes catch frogs when at liberty. It is curious that the frog seems paralysed at the very sight of a snake. Half a dozen hops would take it out of danger, but those hops it does not make. It always screams, and then crawls slowly with a dragging gait, and acts just as a man afflicted with nightmare seems to act when he dreams that he is being pursued by some horrible monster. More than once I have been attracted to the spot by hearing the scream of the frog.

People often ask me where to find snakes. The reptiles may be found in almost every hedge or ditch, but to detect their presence requires some little practice. When I had a school, one of my pupils was infinitely my superior in snake-catching, not even requiring to see the reptile. He knew the slight, but peculiar rustle, which the snake cannot help making while it is crawling through grass and herbage, and as soon as he heard it, he jumped at the spot and almost invariably returned with the snake in his hands.

Some of the boys were great snake-fanciers, and used to carry their pets in their pockets. I very much fear that a snake was sometimes produced during school-hours; but there are occasions when school-masters know how to shut their eyes.

There was rather a curious point about these pet snakes. When first caught, they emitted the peculiarly fetid odour which belonged to them, but in a very short time they allowed themselves to be

handed about from one boy to another, to be thrust into their pockets, or tied round their necks, without giving out the faintest indication of the penetrating and enduring stench.

Lovers of warmth, as are all snakes, this creature is very fond of manure-heaps, especially those which are allowed to remain long enough to become heated like wet hay, and which, on a frosty day, may be seen sending up volumes of malodorous steam.

When I was a boy there was an excellent brick manure-pit by the stables. All kinds of refuse were thrown into it, and in consequence it was always hot. In this pit we could mostly find, not only the snakes, but strings of their soft white eggs; sometimes fifteen or more being united end to end like birds' eggs strung on a grass-stem.

But this pit was quite unproductive when compared with one in Wales, an account of which is here given. It was taken from a local paper, dated Oct. 1878. "A day or two ago, Mr. Robert Carver, of Werrallt, between Carmarthen and St. Clear, was out on the farm with some of his servants, when they came upon a most extraordinary bed of snakes, in a large heap of manure that was going to be used for agricultural purposes at Cwmdwmyfron. A grand slaughter commenced, and no less than 352 snakes in all were killed, and thousands of eggs, in clusters like bunches of grapes, were destroyed. Three of the snakes were of large size, and 100 of them were nine to twelve inches in length."

Should any of my readers wish to preserve a string of eggs, they can easily do so.

Each egg should be emptied of its contents by a single hole in the side. The empty shells should then be filled with sand, care being taken to suspend them in a piece of soft net, so that they shall not be flattened by lying on a hard surface. When they are quite dry, the sand can be shaken out, and the eggs will ever afterwards retain their shape.

In the field, but very seldom in the lane, may be found the VIPER (*Pélias berus*).



VIPER.

This, as I have already remarked, is the only British reptile we need fear. It is much more common than is generally thought, because it is so timid that it keeps itself well out of sight, and very seldom emerges from its shelter except to catch prey or bask in the sun.

The latter propensity often leads to its destruction, for the Viper is perforce obliged to find an exposed spot in order to enjoy the sunbeams, and so allows itself to be seen. Moreover, it is so occupied with the grateful warmth that it may be approached quite closely without being alarmed.

Now let us see how to know a poisonous viper from a harmless ringed snake.

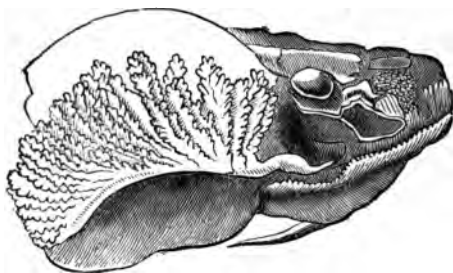
It is invariably a small reptile; it wants the conspicuous yellow patches on the head, and it has a chain of black marks running along the spine. This last characteristic is invariable. Vipers differ greatly in colour, some being grey, some brick-red, some brown, and some yellow; but all have the black chain, which shows itself even in those very dark specimens which are called Black Vipers. And as a further means of identification there is a large black V mark on the top of the head. Chain and V together cannot be mistaken, and no English reptile except the Viper has them.

Then the shape of the Viper's head is quite different from that of the ringed snake. Instead of being long and narrow, it is short, and much widened at the base. This formation is common to all venomous snakes, and its object is as follows.

Every one knows of the deadly poison which can be discharged into the wound made by the serpent's fangs, but every one does not know whence the poison comes. If a Viper be killed and the head carefully dissected, a large gland will be seen on each side, by which the poison is secreted; and from each gland proceeds a duct, which conveys the venom to the

base of the tooth. It is of a yellowish colour and oily consistence.

Now for the mechanism by which the poison is instilled into the wound. The accompanying extract



POISON-GLAND.

is taken from my "Illustrated Natural History," vol. iii., p. 113, and was written while dissecting the head of a newly-killed viper:—

"On examining carefully the poison-fangs of a viper, the structure by which the venom is injected into the wound will be easily understood. On removing the lower jaw the two fangs are seen in the upper jaw, folded down in a kind of groove between the teeth of the palate and the skin of the head, so as to allow any food to slide over them without being pierced by their points. The ends of the teeth reach about half-way from the nose to the angle of the jaw, just behind the corner of the eye.

"Only the tips of the fangs are seen, and they glisten bright, smooth, and translucent, as if they were curved needles made from isinglass, and almost as

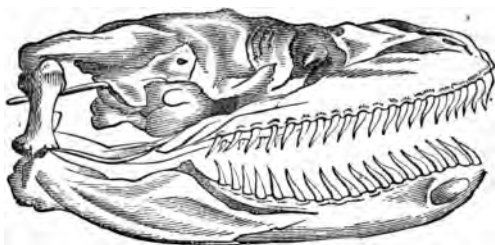
fine as a bee's sting. On raising them with a needle, or the point of the forceps, a large mass of muscular tissue comes into view, enveloping the tooth for the greater part of its length, and being, in fact, the means by which the fang is elevated or depressed. When the creature draws back its head and opens its mouth to strike, the depressing muscles are relaxed, the opposite series are contracted, and the two deadly fangs spring up with their points ready for action. It is needful while dissecting the head to be exceedingly careful, as the fangs are so sharp that they penetrate the skin with a very slight touch, and their poisonous distilment does not lose its potency even after some little time.

"The next process is to remove one of the teeth, place it under a tolerably good magnifier, and examine its structure, when it will be seen to be hollow, and, as it were, perforated by a channel. This channel is, however, seen on closer examination to be formed by a groove along the tooth, which is closed except at the one end, whence the poison exudes, and the other at which it enters the tooth. If the tooth be carefully removed, and the fleshy substance pushed away from its root, the entrance can be seen quite plainly by the aid of a pocket lens. The external aperture is in the form of a very narrow slit upon the concave side of the fang, so very narrow, indeed, that it seems too small for the passage of any liquid.

"There are generally several of the fangs in each jaw, lying one below the other in regular succession. From the specimen which has just been described I removed four teeth on each side, varying in length

from half to one-eighth the dimensions of the poison-fangs."

Now, if the reader will look at the accompanying sketch of the head of a venomous snake, he will see how the fangs are placed, and how, if pressed backwards, they will rest against the upper lips and be quite concealed.



SKULL OF VENOMOUS SNAKE.

The curious structure of the bones is also shown. The lower jaw is not jointed to the upper as in the mammals and birds, but its base moves on the end of a rather long bone set diagonally in the head, as seen in the illustration. Were it not for this structure, the snake could not open its jaws widely enough to swallow its prey.

The food of the Viper consists chiefly of mice, but it is not averse to young birds, and is apt to climb trees and rob the nests of little birds. One of my friends, who was bitten by a Viper, saw the reptile just as it had stolen and eaten one or two newly-hatched blackbirds.

Is the Viper dangerous?

It is, and it is not.

I am sure that it never attacks human beings voluntarily. Of course, if it should be accidentally trodden upon, it will turn and bite, but it is so timid that it very seldom is trodden upon.

I passed some time in Hampshire in a spot celebrated for Vipers. At first I was rather nervous about them, as it was hardly possible to take half a dozen steps without seeing one or two Vipers gliding away. But they were so shy, that they retreated at the sound of the footsteps, and in a day or two I thought no more about the Vipers than about so many earthworms. Indeed, they were much more afraid of me than I of them.

Would I kill a Viper if I saw it?

Certainly not, unless it were wanted for scientific purposes, or were in some place where its presence might be dangerous. Even if it were to make its way into a garden, I would try to capture it alive, and set it at liberty in a field where it could be useful in catching the destructive field-mice.

The poison of the Viper affects different people differently. On one or two occasions it has been fatal, but, as a rule, it only resembles a hornet sting, similar symptoms being noticed in both cases.

CHAPTER VII.

SLUGS AND SNAILS.

Invertebrates—Molluscs—Slugs and Snails—Their ravages in a garden—Poultry and Slugs—Uses of Slugs and Snails—The garden and the Slugs—Habits of the Slug—Ammonia and salt—Slime of the Slug—Distinction between Slugs and Snails—Shell of the Slug—Field Snails—The Roman Snail—Snails as food—Snail-feast at Newcastle—Wasted food—Rats for the table—Rat pie—Frogs for the table—Eggs of Slugs and Snails—The Snail in winter time—Its winter quarters—The Epiphragm—Thrushes and Snails—British Snails.

ALL the preceding animals belong to the vertebrates. Inasmuch as the invertebrates, or boneless animals, outnumber them a hundred times over, even including the fishes and the frog tribes; and as I have not several folio volumes at my disposal, I can only give a brief mention of a very few examples, beginning with the Molluscs.

SLUGS and SNAILS are very plentiful in this country. They swarm in fields and lanes, and are apt to do great mischief in gardens, especially to wall-fruit, into which they will bore large and unsightly holes, invariably choosing the ripest portions. They always come at night, and by the dawn of day they will have disappeared into their hiding-places. But there is no

doubt as to the identity of the aggressors, for the trail of shining slime points conclusively to the fact that either a Slug or a Snail has done the mischief.

Nearly every one kills Slugs and Snails whenever they can be found, and the owners of gardens cannot be held to be wrong in so doing. The creatures are in their place while in the field or lane, but they are out of it when in the garden ; and as they cannot be kept out, they must be destroyed. Those owners of gardens who are also poultry-keepers cannot do better than take as many as they can, and give them to the poultry. Ducks are excellent assistants in this respect, and if a dozen or so are turned into the garden after a shower, when the Slugs and Snails are abroad, they will scarcely leave a single one alive.

It is evident that they must have some use in the world, or they would not have been made ; and it is equally evident that the field and the lane are just the places where they must be needed. But as grass is useful in a field, though it must be eradicated from the gravel path, so must the Snails and Slugs be extirpated from the garden.

Their abolition is not an easy task, as they have a habit of hiding themselves under almost any object that gives them shelter. If a log of wood be allowed to lie on the ground for any time, Slugs and Snails are sure to be found under it. The heaps of flower-pots which gardeners are so fond of piling up against walls are sure to be tenanted by these unpleasant trespassers, as are stone-heaps, faggot-stacks, and the like. Behind a water-butt is always a favourite hiding-place.

As far as Slugs go, I have generally found that ammonia dissolved in water is tolerably certain to bring them out of their hiding-places, if not to kill them. For the Slug is curiously protected by the slime which exudes from it so plentifully, and which will enable it even to crawl through quick-lime without being killed. Indeed, it is so abundant, that the Slug when it ascends trees can let itself down from the branches by means of the slime, which forms itself into a kind of rope.

How is a Slug to be distinguished from a Snail ?

The popular idea is that Snails have shells, and that Slugs have none. This, however, is wrong, for most Slugs have shells, though they are very small and delicate, and almost always hidden under the skin. I have now before me a shell which I took from a Grey Slug. Though the Slug was a large one, the shell is scarcely larger than a good-sized spangle, and not as thick, except at the edges.

To extract the shell is not difficult, but requires a little care. First, kill the Slug by immersing it in boiling water, when death will be instantaneous. Then clear away the slime, and place the slug in a shallow vessel of cold water, pinning it by each end to a flat piece of cork loaded with lead.

On the back, just behind the head, is a sort of hump, which is the "mantle" of the Slug; cut this open very carefully, and within it will be found the shell. It is very fragile, so that some care is needed to remove it without injury; but when dried it is tolerably strong, though exceedingly brittle. The best mode of showing it is to let it float upon a piece

of dark blue cardboard, lift it out of the water, and let it dry. It will adhere firmly to the cardboard without the use of cement, and can be examined with a lens.

Now we have a little to say about the Snails, which are quite as plentiful as the Slugs. The size and position of their shells at once distinguish them, for the Snail is able to withdraw itself entirely into its shell, and so to obtain a shelter without needing to seek such retired spots as do the slugs. As far as the animals themselves go, there is little difference between the Snails and the Slugs, and to the shells we must look as the chief, if not the only distinction.

Perhaps Snails may prove to be more useful than we at present know, and may be restored to the place which they once held as a dainty food, rivalling the oyster when cooked. In several parts of England there may be found huge Snails (*Helix pomatia*), the descendants of those which had been imported from Italy by the Romans, and which seem to have clung ever since to their new homes. Now, the Romans were noted gourmands, and we may be sure that they would not have taken the trouble to import Snails had they not known the delicacy of their flesh.

We eat periwinkles and whelks, which are nothing but sea-snails; and we may just as well eat snails of the land as those of the sea.

Nothing but prejudice stands in the way, the same prejudice which restrains the Scotch and Irish from eating eels. The amount of excellent food wasted in this country is really shameful. Most people would say that they would not eat a rat to save themselves from starving. This is mere prejudice, for I can state

from much personal experience, that rats afford peculiarly delicate food, especially when made into a pie, with the addition of a little bacon or fat pork.

If eaten cold, a better pie cannot be found. The flesh of the rat is beautifully white and tender ; and after the pie is cold, a thick layer of crystalline jelly covers the whole of the meat. Mice, too, are just as good as larks ; and if properly cooked, a mouse pudding would be almost indistinguishable from the well-known lark-pudding. So it is with the snail. In



GARDEN SNAIL.

France I have often seen the poorer classes cooking their snail dinners in iron plates over a little charcoal. And in these days of dear meat and fuel, it is no small advantage to be able to find a plentiful, nutritious, and savoury dinner in every hedge ; the snails costing nothing, and the charcoal about a farthing. At Newcastle there used to be, and may be still, an annual custom among the glass-blowers of holding a snail-

feast; the snails for which were gathered on the Sunday previously to the feast.

Why we should eat frogs in France, and pay highly for them, while we contemptuously refuse the frogs in England, which we could procure for a nominal sum, I cannot understand. They are not so large as the French frog; but their flesh, if dressed in the same way, is quite as good.

The eggs of the Snail are very plentiful, and are well known to every gardener. They are always placed just below the surface of the soil, and are soft, spherical, semi-transparent, and nearly as large as sweet peas. Those of the slug are smaller, more oval, and are deposited in clusters at the roots of grasses, and in similar localities, where they may be found plentifully. I have often had both kinds of eggs sent to me by persons who had been observant enough to detect them, but who did not know what they were.

Not being able to endure cold, the Snail always retires to a convenient shelter in the winter time. Hollow tree-trunks are nearly sure to be converted into winter quarters for Snails, but their usual mode of passing the winter is by making a home for themselves among the heaps of fallen leaves and withered grasses which are found at the bottoms of hedges, and in similar localities.

The Snail is no architect, but it crawls under the leaves as deeply as possible, and then works itself about, so as to form a kind of chamber, agglutinating the leaves together by means of its slime.

To this ever-useful slime the Snail is indebted for a further defence against the cold. Withdrawing

itself into the shell it closes the mouth with a thin but tolerably strong membrane, technically named the "epiphragm." This membrane is nothing but slime, which is allowed to dry, and then the Snail retreats farther into the shell. Some species make several epiphragms, one behind another.

It is very seldom that a solitary Snail makes such a leafy home. Generally a group may be found under the leaves, all sticking together, so as to lessen the necessity of epiphragms.

Finding these hidden Snail groups is by no means an easy task, and when they are discovered it is generally the result of accident. But the thrush, having its wits sharpened by hunger, is an indefatigable Snail hunter, and many a heap of broken shells lying near a large stone announces the success of the thrush, and the destruction of the Snails.

I very much regret that out of so many species of Slugs and Snails as inhabit the fields and lanes only two can be even partially described. But our limited space will not allow a more extended notice, and so the commonest species of both divisions must be taken as typical examples of the land Molluscs.

CHAPTER VIII.

INSECTS.

British Insects and their numbers—The Stag-Beetle—Its fondness for lanes—Catching Stag-beetles—Jaws of the male beetle—Its powers of defence—Size of the beetle—Variation in development—Damage to trees—The larva or grub—The Cockchafer—Its larva—Destructive powers—The Rook and the Cockchafer—Structure of the Cockchafer—The Nut-Weevil—Ravages among nuts—Weevils generally—"Corked" wine—Beauty of the Weevils—The Ladybirds—British Ladybirds—Their value—The Aphis or Green Blight—Its rapidity of increase—Roses and hops—A nation of Amazons—Honey-dew—Ants and Aphides—Insect cows—Voracity of the Ladybird—Its transformations—Ladybirds and hop-gardens—Ladybird armies.

IF space fails us when we only have to describe the Molluscs, which are numbered by hundreds, how much must it fail when we come to the INSECTS, which are numbered by thousands. Even to give their names and localities would demand three or four such volumes as this. We will therefore abandon so obviously hopeless a task, and content ourselves with a few of those insects which have some special point of interest.

I have often wondered why the great STAG-BEETLES (*Lucanus cervus*) should be so fond of lanes. Their great size, weight, and lumbering flight render them

very conspicuous and easy of capture, and yet they do not seem to care for the open field, where they might fly about in comparative safety, but are curiously



STAG-BEETLE.

attracted to the lane, where they are at the mercy of any passing boy, for there is nothing easier than catching a Stag-beetle on the wing, even if it be far above the reach of a net. All that is needful is to throw a

stick at it, and a very accurate aim is not required. Should the stick pass the insect within a foot or two it appears to lose its presence of mind, and comes tumbling down to the ground, when it is quite as likely to fall on its back as its legs.

As soon as the shades of evening begin to fall, out come the Stag-beetles by hundreds, and are sure to fly along a lane, if they can find one ; if not, a road comes next in their fancy, and so plentiful are they in some roads that they may often be found crushed to death by the wheels of vehicles which they had not been active enough to avoid.

In spite of the formidable, horn-like jaws with which the male Stag-beetle is armed, it may be handled with perfect safety, for it seldom bites, although it will assume a menacing attitude, and when it is at last provoked to bite, it can only inflict a smart pinch which does not even break the skin.

Only the male possesses these peculiar jaws, those of the female being quite short, without any branches, but coming to points sharp enough to bite more severely than the larger jaws of the male. Some entomologists go so far as to say that the male never can be induced to bite, but I have kept too many specimens not to know by experience that the insect can and does bite on occasions.

All entomologists know that insects are often variable in size ; scarcely any, however, are so remarkable in this respect as the Stag-beetle. The average size of a well-developed male is about equal to that of the illustration, but there are many specimens which are rather larger, and many more which are very

much smaller, some, indeed, being not very much larger than ordinary hornets.

Insufficient food is thought to be one reason of this diminutive size, but although this may have some influence upon the dimensions of the insect, it cannot be the only reason. Among mankind, for example, there are giants and dwarfs, but the giant certainly does not owe his lofty stature to his capacity for taking nourishment, nor is the diminutive size of the dwarf due to starvation.

People who have observation sufficient to notice this discrepancy in size, but are ignorant of entomology, always think that the small stag-beetles are young ones, and that they will become larger as they grow older. Entomologists, however, know that the insect never grows after it has assumed its perfect form, and that all the growth takes place while it is a larva, *i.e.*, a caterpillar or grub.

Given a large insect, and it will invariably be found to have proceeded from a very large grub. Now, the Stag-beetle is by far the largest of our British beetles, almost approaching in size the splendid insects of the tropics. Consequently, we may expect a very large grub. And so it is, but not easily found, as it passes its larval state of existence within the trunks of trees, generally elms, to which it does infinite harm.

There is no difficulty in finding out whether or not the tree has been attacked by the Stag-beetle. It always begins to decay at the top, though the grub is near the root. The leaves do not thrive on the topmost branches, but fall off, and the tree perishes downwards by slow, but certain degrees.

Remedies seem to be useless. Probing the burrow of the grub with a steel wire has been attempted with partial success, but it is not easy to find an entrance into the burrow, or to form any idea of the direction which it takes.

The grub is white, about as large as a man's forefinger, smooth-skinned, and soft, the only hard portion being the horny head, with its powerful cutting jaws. As it does not need to move about in search of food, its legs are very small and slight, only just large enough to drag it onwards as it gnaws its slow way through the wood.

Taken out of the tree, it is absolutely helpless. It cannot even stand on its tiny legs, and its large, soft body is always curved, and is so loaded with fat that the creature is obliged to lie on its side. Lay it on a smooth table, and it will not be able to move an inch, so feeble are the legs, and so cumbrous is the body.

Plentiful as is the Stag-beetle in many parts of England it is exceedingly local, and though it may swarm in some lanes, there may be others which present almost identical features in their geology, fauna, flora, and watershed, and yet in which not a Stag-beetle can be found.

Allied to the stag-beetle, the COCKCHAFFER (*Melolontha vulgaris*) has many of its habits, but differs exceedingly in many respects.

The larva or grub of the Cockchafer is almost exactly like that of the stag-beetle, except that it is very much smaller, and if the reader would like to realize the shape of the stag-beetle larva, he has only to take the figure of the cockchafer grub, which is

given in the accompanying illustration, and magnify it by four. It is, however, not as white, and scarcely as polished.



GRUB OF COCKCHAFER.

Like the preceding insect, it does great harm to vegetation, and is hidden from sight until it assumes the perfect form. But instead of burrowing in timber, it lies under the ground, and instead of killing trees, it destroys herbage by devouring the roots.

It far exceeds the stag-beetle in its powers of mischief, for, whereas that insect works no harm after it has developed from a beetle into a grub, the cockchafer is as destructive above ground as it was below.

The stag-beetle, though it has damaged the timber, spares the foliage, but the Cockchafer, after it has devoured every root within its reach, attacks the leaves of trees, and in places where it is more than usually plentiful, will not only strip every leaf from the trees, but even gnaw the tender bark of the young twigs.

It is not often in England that very extensive damage is thus done to the trees, but on the Continent the cockchafer is often as great a plague as are the locusts in the East, and I have seen whole rows of trees without a leaf upon them, and with clouds of cockchafers flying round their bare branches.

When treating of the rook, I mentioned the services which it renders to man in detecting and eating the cockchafer grubs. I have not seen the starling do so, and probably the bird finds its beak scarcely long or powerful enough for such a task as dragging the cockchafer grub from its bed.

It is evident, therefore, that the insect ought to be reckoned among those which are noxious to man, and that it should be kept within proper bounds. This we cannot do, but the rooks can and will, if they be only let alone.

To entomologists, the Cockchafer is a classic insect, for the wonderful work of Strauss-Durckheim has immortalised it. He has taken the creature to pieces with the most elaborate care, and there never was so complete a chart of the anatomy of an insect as is found in Strauss-Durckheim's dissections of the Cockchafer.

Now we will take a brief glance at another beetle which is also injurious to man, destroying the fruit, though it does no harm to the leaves, roots, or timber.

There are few lads who have not gone nutting in their younger days, when teeth did service as nut-crackers, and who have not been made unpleasantly familiar with the nauseous taste of a "bad" nut. Once let such a nut be bitten, and there is hardly any likelihood of ridding the palate of the horrible flavour for the rest of the day.

When such nuts are opened, a large portion of the kernel will be found wanting, and its place filled with a mass of little black fragments, in the midst of which lies a fat white maggot. This is the larva of

the NUT-BEETLE (*Balaninus nûcum*), which belongs to the vast group of the Weevils. All these beetles have long snouts, of which the Nut Weevil affords a striking example. The mouth is very tiny, placed at the very end of the snout, and the antennæ are invariably set far back, so as to allow the beetle to bore holes of considerable depth.



NUT-WEEVIL.

The whole tribe are destructive, and even in their perfect state much damage is done by them, not only to growing plants, but to wheat in granaries, corks in bottles, &c.

No one can have shelled peas without noticing that many of them are tenanted by little maggots. These are the larvæ of a small weevil.

As to wheat, the havoc that is made in granaries by the weevils is almost incredible. Considering the diminutive size of the insect, it is really wonderful to read that in a single corn-store the weevils which were sifted out were measured by tons.

Most persons must have heard of "corked" wine, even if they have not been unfortunate enough to taste it. The very best wine, if corked, is as nauseous as the black mass inside a bad filbert, and for a similar reason. There is a tiny weevil which deposits its eggs in the cork, mostly seeming to choose those which are used for the choicest wines. The eggs are hatched into little grubs, which feed upon the cork, fill their burrows with the black refuse, and so communicate their repulsive taste and odour to the wine.

Mischievous as they are, some compensation may be found in the exceeding beauty which distinguishes the majority of them. None of our English species possess the dazzling splendour of the Diamond Beetle, one of the tropical weevils; but many are nearly as beautiful, though very much smaller, and needing a tolerably powerful lens and a good light to display the living jewellery with which their bodies are encrusted.

One of our most familiar insects, and one of our best friends, is the common LADYBIRD (*Coccinella punctata*).

From earliest childhood we have been accustomed to ladybirds, and I suppose that there are few of my readers who have not in their childish days heard the nursery song on the Ladybird, and encouraged it to "fly away home."

There are many English species of Ladybird, and we

might almost wish that there were more. Although the Seven-spot Ladybird has been chosen as the typical species, it is not nearly so plentiful as the Two-spot, whose numbers are rendered rather obscure by the infinite variety of colouring.

The typical hue is dull red, with a single black spot on each of the wing-cases ; but some are black, with two red spots ; some are black, with a dash of red ; others are yellow, with several black spots ; others are yellow, trellised with black ; and others are black, trellised with yellow.

There seems, indeed, to be no end to these varieties of red, black, and yellow, and at least thirty varieties of this single species are recognized ; in fact, when a collector finds a small ladybird which he does not know, he always considers it to be a Two-spot, and generally finds on examination that he is right.

Small, and apparently insignificant, as are the Ladybirds, the value of the services which they render is almost beyond calculation. Were it not for them, our brewers could scarcely find a hop, or our gardeners a rose.

Few of my readers, perhaps, are familiar with hop-gardens, but all know something about rose-growing, and must have found their roses suffering from the attacks of the green-blight, as it is popularly called, *i.e.* the green aphid, which swarms upon the twigs, leaves, and buds in such numbers as absolutely to hide them, each individual having a long, sharp sucker plunged deeply into the plant, drawing out its nutritious juices, and making the flowers unpleasant to the touch.

Waging war against these pests is a task almost as hopeless as weaving ropes from sea-sand. Not only are they numerous to begin with, but their rate of production is such that it is almost impossible to kill them as fast as they increase.



LADYBIRD.

Mischievous as are the Aphides, or Plant-lice, as they are often called, they are very wonderful beings, and we cannot pass them by without a word of notice.

A single aphid on a branch will cover the whole of it with its progeny in the course of a day or two. As a rule, insects lay eggs, which are hatched into larvæ, are then developed into pupæ, and must assume the perfect state before they can reproduce their kind.

Aphides, however, are quite independent of all such restrictions, and are either hatched from the eggs, or produced alive, according to circumstances.

Supposing, for example, that the single aphid which has just been mentioned has been hatched from an

egg, she produces a whole series of young. These never move from their places, but produce more young, and these do the same. Ten broods or so are thus produced in a single summer, and she then takes to laying eggs, which will be hatched in the following year. It has been calculated that a single aphid will thus in one year become the progenitrix of an offspring which would equal in number the whole human inhabitants of the world five times told.

Another wonderful point about these insects is that they do not trouble themselves about the male sex, one female having been known to be the origin of successive broods, among which for four years not a single male had been found.

Nearly all the aphides are wingless, but some of them possess ample wings, as may be seen by



APHIS.

reference to the accompanying illustration, which represents a magnified figure of a winged aphid. The actual size is shown by the lines below.

Most of us have heard of "honey-dew," and many must have seen, felt, and possibly tasted it. Honey-dew is more plentiful on some trees than on others, the Lime being generally the most favoured in this respect. Any one can detect its presence by sight, touch, taste, and hearing.

The leaves look as if they had been varnished, they feel and taste as if they had been washed with sugar-and-water, and they are so crowded with bees and other sweet-loving insects that the hum of their many wings may be heard at some distance. Crowds of ants also may be seen swarming all over the tree ; and here is another singular point in the history of the Aphis.

I have already mentioned that the aphides pass nearly all their lives in sucking juices from vegetation. These juices are transmuted within the body of the insect into a sweet liquid, which perpetually exudes through two little tubes on the upper part of the abdomen. These tubes can be seen even by the naked eye, and with a moderately powerful lens the sweet liquid can be seen issuing from them, first forming itself into tiny round drops, and then falling.

This liquid is the honey-dew, and when the insects are especially abundant, almost every leaf on the tree will be covered with it.

As to the ants, they consume enormous quantities, not only gathering it from the leaves, but licking it up as it exudes from the insect. Not only do the ants act in this manner, but it has been ascertained that they treat the aphides exactly as we treat milch cows, keeping them tame, so to speak, and guarding them in order to extract the honey-dew from them, This

they can do the more easily, because, as I have already stated, almost all the aphides are fixtured, very few attaining the winged state.

Mr. Rymer Jones has well remarked that aphides present themselves to us in two different aspects. Considering the astounding rapidity of their increase, we wonder that they have not covered the earth; considering the number of their enemies, we wonder that there is an aphid left. Nature, in fact, can always preserve her own balance as long as man does not interfere; but when man alters that balance, he must take the consequence of his acts.

Now, one of the most important means of preserving the balance of nature is to be found in the ladybirds, all of which feed exclusively on aphides. The presence of one is a sure sign that the other is not far off. Suppose, then, that a rose-bush be covered with aphides, the Ladybird will find them out. She will deposit on the leaves clusters of tiny eggs, which have been happily compared to yellow skittles set on end. These are speedily hatched into little grubs, which at once begin to prey on the aphides. The grub is dark-grey in colour, spotted with black and yellow, and though its legs are very small, and only move the large and clumsy body very slowly, they are quite strong enough to enable it to reach the aphides, which do not walk at all.

It eats with such insatiable voracity that it soon becomes "full-fed," as insect-breeders say, and then ceases to feed, and fastens itself to the leaf with a gummy secretion.

The skin then splits, and shows the pupa within it.

In a week or so, the skin of the pupa splits, and out comes the Ladybird. It is soft and pale at first, but a little exposure to air and light hardens the skin and brings out the colours, and there is our familiar Ladybird ready to start on a new campaign against the aphides. When I was quite a tiny boy, and in the habit of wandering about the garden with a magnifying-glass and a pocketful of pill-boxes, I used to trace the career of the Ladybird from the egg to the perfect insect, and have felt a sort of affection for them ever afterwards.

Should any one wish to see the ladybirds at their best, he should visit the hop-gardens. There are no pests more dreaded by hop-growers than the "fly," as the aphid is called. But numerous as they may be, and rapidly as they increase, they are vanquished by the armies of ladybirds, which swarm in such countless multitudes, that when on the wing they look like large red clouds.

They even cover the seashore with their numbers. They make walking in "esplanades" impossible. If a window be open, they crowd into the room, and redden the walls and furniture. They line every corner, and hang in heavy festoons along the angles of the walls and ceilings. They smell abominably. But, unpleasant as they may be, those who have any interest in the hops are only too glad to see them, and look upon them much as the inhabitants of the West Indies look upon the scavenger ants, which are dreaded foes in themselves, but which are welcomed into houses, where they destroy every rat, mouse, snake, and cockroach, and then take their departure in search of more.

CHAPTER IX.

INSECTS—(*continued*).

The Lacewing Fly—Its habits—Beauty of the insect—Its golden eyes—Its evil odour—Eggs of the Lacewing—How placed on their footstalks—Aphis Lions—Earwigs—Popular prejudices—Wings of the Earwig—Maternal affection—Use of the tail-pincers—Bees—Mode of extracting the juices of flowers—Jaws of the Bee—Honey and wax—Gall-flies and their ravages—Nests of the Gall-flies—Oak-apples—Bedeguars—Object of the gall—Development of the insect—Ink-galls—Butterflies—The Scarlet Admiral—The Peacock, Tortoiseshell, and Painted Lady—Caterpillars and Stinging-nettles—Transformations of insects—Wonderful development of the fat—Wings of insects—A new pleasure.

ANOTHER of the aphis-destroyers may be found in every field and lane, and is well known under the popular and appropriate names of Lacewing and Golden-eye.

Towards the dusk of the warm evenings the moth-hunter is sure to capture several specimens of the Lacewing, and beautiful as they all are, he is glad enough to shake them out of his net without touching them.

Few British insects possess half the beauties of the living Lacewing-fly. It belongs to the order Neuroptera, which includes the Dragon-flies, May-

flies, Termites, &c., most of which have peculiarly large and beautiful wings. Those of the Lacewing are ample, iridescent as if made of thin films of

mother-of-pearl, and so transparent, that when they are closed the body can be seen through them, as shown in the illustration.



LACEWING FLY.

The body is very slender, and of a tender light green, while the large, round eyes glow with a golden lustre.

After death, the wings still retain their colouring, but the body becomes opaque yellowish-brown, and the golden fire fades wholly from the eyes. As

yet, no one has been able to preserve the colours of the Lacewing any more than those of the dragon-flies.

As its wings, at all events, retain their opalescent splendour, why is the entomologist glad to shake it out of his net? Because it possesses an odour, or rather a stench, so intolerably offensive, and so powerfully adherent, that he dares not touch it unless *he makes up his mind to go home at once, and*

wash his hands repeatedly before he can bring them near any human nostril. There is a saying, that the burnt child dreads the fire, and certainly, any one who has once seized a lacewing, through ignorance of its qualities, is not likely to do so again.

In spite of this drawback, it has its good qualities, and the best of them is its aphid-destroying nature.

If the reader will refer to the illustration, he will see a lacewing seated, with closed wings, on the central leaf. The insect is about half as large again as drawn. On the edges of two of the side leaves and the stalk of the uppermost leaf are a number of very slender filaments, knobbed at the end. The little knobs are the eggs of the Lacewing, and when they are hatched, and the young larvæ have emerged, they look so like mosses that they were long ranked among them.

I was never fortunate enough to see a lacewing deposit its eggs, but my friend, Mr. A. Butler, of the British Museum, kept some of them, and frequently saw them in the act of laying eggs.

First, they deposit a tiny drop of viscid matter on the stalk or leaf, and draw it up into a thread, which immediately hardens on coming into contact with the air. An egg is rapidly attached to the end while it is still viscid, and the insect then goes off to repeat the process until her stock of eggs is exhausted.

The illustration well represents the form and size of the eggs, but it cannot reproduce their colour, which is white, the footstalks being nearly translucent.

The larvæ, or grubs, of the Lacewing, look like

little long-bodied maggots, with very blunt tails, as is shown by the figure in the illustration, magnified in order that its shape may be better seen. These



APHIS LION.

larvæ are quite as rapacious among the aphides as are those of the ladybirds, and have therefore been popularly called aphid lions.

I have already mentioned that the dusk of a warm evening in early summer is the best time to catch Lacewings, but they can be found in the daytime, clinging to the under surface of leaves. Owing to their green colour, they are not easily seen, but betray themselves to entomologists by their brilliant eyes, the lustre of which they cannot conceal.

Few insects are so deeply and so widely detested as the EARWIG (*Forficula*), which is quite as harmless as the blindworm, and, like that creature, is the mark for universal obloquy.

Nurses have much to answer for in this respect. There is scarcely a nursemaid who does not tell her little charges that the Earwigs crawl into human ears, make their way to the brain, and drive their victims mad. And as the anatomical knowledge of the nurses

and the children is about on a par, the statement is equally believed by both.

I need scarcely say that no insect would be likely to crawl into a human ear, and that if it did so by mistake, it would be glad enough to back out again at once. For the peculiar secretion which is needful for the preservation of the ear is intensely bitter, and no insect would touch it.

I do not think that the Earwig does any harm either in the field or lane. It certainly is injurious in flower-gardens, gnawing the edges of the petals, and sadly defacing them. But as this work does not deal with gardens, but with fields and lanes, we may safely place it among our harmless insects.

Two points the Earwig has in its favour, namely, its singularly beautiful wings, and its affection for its eggs and young,—a very rare trait among insects. Most persons are aware of these facts, but very few appear to have seen the wings or the Earwig when sitting on its eggs.

The wings are extremely large, and very delicate, as must needs be the case, if they are to be folded under their two little squared covers. If an earwig be caught and examined, two little spikes are seen projecting from beneath the covers. These are portions of the wings.



EARWIG ON THE WING.

It is not easy to induce the insect to spread its wings voluntarily, but they can be forcibly opened, and without injury, by blowing smartly under the wing-covers (or elytra) towards the head. The spread of the extended wings is really wonderful, and now that they are expanded, how are they to be folded and replaced under their covers? I believe that no human fingers could perform the task, but the Earwig completes it in a few seconds, if left to itself.

First, it gives the wing a shake, so that it falls into folds like those of a handkerchief, if held by the middle and shaken. Then it turns the tail over its back, and by means of the pincers, which it uses as deftly as if they had been finger and thumb, folds and refolds the wing, and pushes it under its cover. Folding the wings is the primary use of the pincers. They can be employed as weapons, and can pinch rather smartly; but their real object is not to act as weapons, but as wing-folders.

So much for the wings, now for the eggs.

In the first warm days of spring, walk along a lane, and lift up the little clods of earth which are to be seen on every bank, and you will be nearly certain to find the Earwig sitting on her eggs. There are not many eggs, but they are large in proportion to the size of the insect, and bear some resemblance to very small mustard-seeds.

The Earwig always sits with the thorax or chest upon them, so that they are protected on one side by her jaws, and on the other by her tail-pincers. The object in sitting upon them is, not to afford them warmth from her body, as is the case with birds, but

simply to protect them. She is so absorbed in her task of love, that the earthen roof may be raised and replaced time after time, without driving her from her eggs.

It has already been stated that the vast numbers of British insects debar even the mention of their names. But although I cannot notice every insect which may be found in a lane, the reader may be sure that in every lane he will find every creature which is described.

We must content ourselves with two of the Bee tribe, and only one representative of the Butterflies.

With the ordinary HIVE BEE (*Apis mellifica*), every one is familiar. Yet, though its habits are well known, and though its anatomy has been carefully studied, the insect is in many points a mystery.

Every one knows that Bees obtain honey from flowers, though few seem to be aware that for this purpose, the Bee makes chiefly use of the wild flowers; such as borage, heather, sainfoin, yarrow, &c., caring comparatively little for the cultivated flowers in which florists delight, but which are uninviting alike to bees and botanists.

It is popularly thought that the Bees suck the sweet juices through a hollow proboscis after the manner of butterflies and elephants. In reality, however, it sweeps the juices from the flowers with its brush-like tongue, which is shown in the accompanying illustration, scrapes it off between its jaws, and passes it into the crop or "honey-bag."

Here it undergoes an inexplicable change. The

liquid passes into the crop simply as a sweet juice, but it is poured out from the crop as honey. Bees can be fed on sugar-and-water, but the short sojourn within the crop changes it into honey.



BEE JAWS.

This is one mystery.

Another mystery is, that from the same sweet juice *is produced* the wax of which the combs are made,

and which is secreted in six little flaps, or pockets, on the under surface of the abdomen. There is no difficulty in finding the wax-plates under the flaps, but how they came there no one as yet knows.

More may not be said about the Bees, because they scarcely come within the province of this book, and can only be casually mentioned.

Our second example is an insect which, though but lately introduced into England, has acclimatized itself so perfectly, that it may take rank among the British insects.

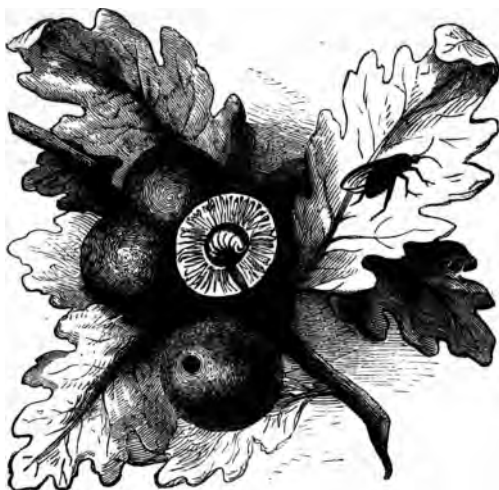
For many years we were familiar with "Oak-apples," and sometimes used to pluck and gild them as ornaments. These, in fact, are "Galls," which are produced by means of an insect called the Gall-fly, and belonging to the enormous group of Cynipidæ. How many British species of Gall-fly there may be no one can tell, and even those who have made a special study of them are unable to suggest any limits as to the number of species.

They all proceed in much the same way. They pierce the young bark of trees, and shrubs, and deposit eggs in the puncture, together with a sort of pungent juice, and leave them. The effect of the puncture is to divert, or rather to attract the sap, and to cause it to produce the remarkable structures which we know by the name of Gall.

There is scarcely a tree or shrub that is free from them, and they may be found even on the thistle.

They take the most varied shapes and colours. Some, like the oak-apple, are soft, smooth-skinned, rounded, and coloured with green, yellow, and pink,

like ripening fruit ; others, such as the Bedeguars, found on the Rose, are covered with a thick moss-like envelope, and coloured bright green and scarlet ; some



GALL-FLY.

are shaped like pine-apples, and covered with flattened pointed scales ; some are small and flat as spangles, and are stuck thickly on leaves ; others are like bunches of currants on a stalk.

But however much they differ in external appearance, they all agree in one point, namely, that they supply at once a habitation and nourishment for the grubs, which are hatched from the eggs deposited by the parent gall-fly.

In some cases,—the Bedeguar being an excellent example,—a number of grubs inhabit one gall, but even then each has its separate home, and leads a solitary life, though surrounded by its brethren.

Many, however, have but a single grub in each gall, and such is the case with the insect in the illustration. If one of these galls be cut open, there is, first, a rather tough outer envelope, and then a mass of cork-like material. In the very centre lies the grub, and there it remains until it has arrived at its perfect state, when it gnaws a hole completely through the gall, and escapes into the open air.

In the illustration one of these galls is seen as it appears when severed, the grub being shown in the centre. The same section shows the kind of passage which it will gnaw at the proper time, and the gall below it shows the hole after the fly has made its exit. The size of the fly itself is shown by the figure crawling on the leaf. Its colour is dull yellowish-brown.

This gall is analogous to that which is used in making the best black ink, and, indeed, very fair ink may be made from the galls of the oak boiled in a solution of sulphate of iron.

BUTTERFLIES are always numerous in every lane and field, but as our space is so precious, we can only find room for one, the SCARLET ADMIRAL (*Vanessa Atalanta*), which is here shown in its three stages, of caterpillar or larva, chrysalis or pupa, and the perfect insect or “imago,” as entomologists call it.

Even if placed among tropical butterflies, the

Scarlet Admiral can bear comparison with the splendour of their colouring, and it is difficult to find any insect which can boast more brilliant hues than the Atalanta, with its broad scarlet belts across its velvet black wings, set off by the series of azure crescents which surround its edges. The well-known Peacock Butterfly, the Painted Lady, and the Tortoiseshells belong to the same genus.

Stinging nettles appear to be rather curious plants for an insect to choose as food, but the envenomed spikes have no effect upon these caterpillars, which may be often found crowded so thickly upon the nettles that their leaves, especially towards the top, are quite hidden by the black masses of caterpillars.

In process of time they have eaten so much nettle-leaf that they have attained their full size, and will then for the last time cast their caterpillar skin, and assume the condition of chrysalis or pupa.

Here it must be remembered that, no matter what the insect may be, and no matter how voracious, it never grows when once it has assumed its perfect form.

We must not be misled by appearances, and think that because an insect is small it is young, and that it can grow larger as it grows older. All growing is done in the earlier stage of existence, and the wonderful amount of food which is consumed is for the purpose of laying up material, which can be afterwards developed into wings, and other organs, scarcely a trace of which can be discovered in the yet imperfect insect.

Wings are a sure sign that the insect has attained

its perfect state, and can never grow any more. Take, for example, the butterfly which is represented in the illustration.



METAMORPHOSES OF BUTTERFLY.

The caterpillar has not a vestige of wings, and in the chrysalis they are incapable of being used, as may be seen by reference to the illustration ; but in the perfect insect they are broad and ample, having been developed from the stores of material that had been laid up within the caterpillar.

The body of the caterpillar is very large and filled with fat, while that of the butterfly is quite small and slender, because the chief part of the fatty matter has been used in forming the wings, antennæ, and other

organs, which are necessary to the butterfly, but would be useless to the caterpillar.

With this very short history of the insects, we must bid them farewell. No attempt has been made to enter into scientific details, but enough has, I hope, been said to induce any one who walks through a lane or a field to see in every insect before him a creature of exceeding interest, and perhaps to induce him to examine the ways of insects more carefully than he has done heretofore.

If so, he may congratulate himself, for he has discovered a never-failing subject of interest. Having once begun observing, he will never leave off. He will be worthy the envy of the monarch who offered a prize for the inventor of a new pleasure, for he will have discovered it for himself, and found in that discovery a more valuable prize than any monarch could offer.

CHAPTER X.

FLOWERS OF THE LANE.

Scope of the work—Scientific nomenclature—Common Flowering Plants—Flowers of the Lane—The rival systems—Spare the flowers—Destruction and desecration—Ode to a roadside flower—The Clematis, Traveller's Joy, or Old Man's Beard—Origin of the names—Clematis in the hedge or garden—Rustic trellises—Iron *versus* wood—Gardeners and their pronunciation—The Barberry—Its fruit and triply-forked spines—The Barren-wort—The Shepherd's Purse—Its ubiquity—Variation in size—Mode of Seeding—Simples—Friar Laurence—The Violet—Its perfume—Colour of its flowers—Use in medicine—The Dog-Violet—The Pansy, wild and cultivated—The Ragged Robin—Why called the Cuckoo-flower—The Red Robin, and mode of distinguishing it—The Evening Campion—The Chickweed and its growth—The Mallow—Damage which it does to gardens—Difficulty of destroying it—Sulphuric acid and its effect on weeds—Mode of applying the acid.

IN the course of the previous chapters, which treat of animal life, I have intentionally avoided any approach to scientific phraseology; and in the following chapters, which will treat of vegetable life, I shall follow the same course.

The reader will hear nothing of involucre, drupe, cyme, perianth, stipule, bract, corymb, and the like; neither will leaves be described as peltate, crenate, pinnatifid, decurrent, perfoliate, or subulate.

All such terms, though absolutely needful for the botanical student, belong to the science of botany, and would be out of place in this sketch of the Lane and Field.

The following pages will therefore contain a simple and popular description of the flowering plants which we are sure to find in lanes and open country, so that any one who takes a walk in the country and tries to use his eyes, may be able to identify most of the plants which he will see.

We will begin with the lane, taking the plants as they are arranged by botanists, upon the natural system, which has quite superseded the Linnean; and having finished with the Flowers of the Lane, we will take those of the Field in similar order.

BEFORE commencing the account of the flower vegetation of lane and field, let me make one request of the reader,—Do not destroy a flower needlessly.

Should they be wanted for any good purpose, take as many as are required and use them. But do not destroy them from sheer wantonness, as too many thoughtless people do, who never can pass through either a lane or a field without slashing right and left with their sticks, and cutting down the beautiful wild-flowers, as a mower lays low the grass with his scythe.

It is an inexcusable desecration in the eyes of all those who love Nature, and especially of those, who like John Hartley, the rustic poet, can feel the beauties of Nature, though they may not be able to

express, or rather indicate, their feelings in his own touching words.

TO A ROADSIDE FLOWER.

“Tha bonny little pooasy ! Aw’m inclined
 To take thee wi’ me ;
 But yet, aw think, if tha could spaik thi mind,
 Tha’d ne’er forgie me.
 For, i’ mi jacket button-hoil tha’d quickly dee,
 An’ life is short enough booath for mi-sen an’ thee.

“Here, if aw leeave thee bi the roodside to flourish,
 Wheer scores may pass thee,
 Some heart ’at has few other joys to cherish
 May stop an’ bless thee.
 Then bloom, mi little pooasy ! Tha’st a beauty
 Sent here to bless. Smile on—tha does thi duty.

“Aw wodn’t rob another of a joy
 Such as tha’s gi’en me,
 For aw felt varry sad, mi little day,*
 Until aw’d seen thee.
 An’ may each passin’, careworn, lowly brother
 Feel cheered like me, an’ leeave thee for another.”

In almost every lane, especially if it be situated on dry, chalky soil, the hedges are sùre to possess the ever-beautiful CLEMATIS (*Clématis vitalba*), which twines its way among the branches, and clings to them with astonishing tenacity, by means of its leaf-stems, which twist themselves round any bough, stem, or even leaf, and hold as firmly as do the tendrils of the vine. I may here mention that tendrils are really modifications of leaves.

* Day, *i.e.* Daisy [Day’s Eye].

It has several popular names, such as Traveller's Joy, and Old Man's Beard.

There are two modes of accounting for the former name, one of which we will hope may be true, and that every reader of this book may see the plant flourishing in his garden. There is a superstition still prevalent in some places, that the Clematis cannot thrive in the garden of a wicked, or even churlish man, and that the wearied and footsore traveller is rejoiced when he sees it, knowing that he will receive a hospitable welcome. The second reason for the name is the more obvious and less poetical one, namely, that its beauty rejoices the heart of the traveller as he passes through the lanes where it grows. For the second name there is no difficulty in accounting.

I have already applied the term "ever-beautiful" to the clematis, and with reason, as it is one of the few plants which are really beautiful in winter and summer.

Its clusters of pretty greenish-white flowers certainly vanish by the end of June, but in their place are developed the seed-vessels, from which hang long, whitish, hair-like tufts, which have earned for the plant the appropriate name of Old Man's Beard.

A prettier shrub for a garden cannot be imagined, especially when trained over rustic, rudely-made trellises and arches, in company with honeysuckles and jessamines. Let the reader make his arches and trellis himself, the ruder and rougher the better, so that they be strong, and above all things, let him eschew the prim set-pieces of galvanized iron, which are exhibited at the seed-shops, and which are enough to make any garden hopelessly vulgar.

Whether the clematis be in the lane or the garden,
please pronounce its name properly, and lay the accent



CLEMATIS VITALBA (TRAVELLER'S JOY).

on the first syllable. If in doubt respecting the pronunciation of any name, there is an infallible mode of ascertaining it. Ask the nearest gardener and pronounce it in exactly the contrary way. They revel in the long words, and *will* use them, not having the

least idea of their signification, nor of the mode of pronouncing them.

I do not object to their custom of pronouncing *Araucaria* as Harry-Carry, but I do not like to have my ears excoriated with *clemátis*, *gladiólus*, and the like. So in this work I give the right accentuation of each word.

Here are some portions of the well-known and useful BARBERRY (*Bérberis vulgáris*), which may be found in the hedges of many lanes, and would be found in more but for the stupidity of the farmers,



BARBERRY.

who have an idea that it is injurious to wheat, and so uproot it whenever they can see it in a hedge.

By so doing they deprive themselves of much useful food, for the barberry furnishes a considerable quantity of fruit, not very unlike red-currants, but oblong instead of round. These berries have a rather peculiar and agreeable acidity, which renders them

admirable material for preserves and tarts. Owing to the amount of acid which they contain, they require a large proportion of sugar.

Even in winter time the barberry may be recognized by its light-coloured bark, and its peculiar three-forked spines, one of which is shown in this illustration. There is only one other British representative of its tribe, —namely, the BARRENWORT (*Epimedium alpinum*), but that plant is very rare, only occurring in mountainous woods in the north of this island, and its claim to be indigenous to England is dubious.



SHEPHERD'S PURSE.

WHERE shall we find the SHEPHERD'S PURSE (*Capsella Bursa - Pastoris*)? Rather, where shall we *not* find it? It occurs in every field and every pasture; but it seems to have an especial love for lanes, along the sides of which it may always be found in profusion. Its size varies considerably, according to the

soil on which it grows. For example, on particularly favourable ground it will grow very luxuriantly, and be nearly two feet in height, whereas the average height on a poor soil will scarcely exceed six inches. It is very seldom that a solitary tall plant is found among the small specimens, or *vice versâ*.

A glance at the plant will show the reason for its name, the seed-vessels decidedly resembling the leathern purse, or "burse," of the Middle Ages.

Its whole system of seeding can be understood at a glance, for it bears at the same time flowers on the top of the stem, then the newly-developed seed-vessels, then the "full purses," and lastly, the "empty purses," those which have been matured and dried.

The Shepherd's Purse was, and I believe is still, in favour as a "simple" among rustic herbalists. I wonder why the wild herbs when used as medicines are always called "yarbs" by the rural practitioner. Yet so it is, and although they will acknowledge that edible vegetables are herbs, they invariably employ the word "yarbs" to distinguish their simples from the medicines furnished by the regular "doctor."

That many of these simples have beneficial effects on the human body there can be no doubt, though there be no truth in the rustic superstition which demands that they be plucked before the morning dew is off the leaves. This superstition is at least as old as Shakespeare's time. The reader may perhaps remember, that in "Romeo and Juliet," Act II., Scene 3, Friar Lawrence is represented as gathering herbs, while "The grey-eyed morn smiles on the

frowning night," and as he is gathering them, soliloquizes as follows :—

" O, mickle is the powerful grace, that lies
In herbs, plants, stones, and their true qualities :
For nought so vile that on the earth doth live,
But to the earth some special good doth give."

Whether the plants deserve them or not, such popular names as Wound-wort, Lung-wort, Wart-weed, Tetter-wort, Worm-seed, Scurvy-grass, and the like, show the uses to which these "yarbs" were put when they earned these names.

" Violets dim,
But sweeter than the lids of Juno's eyes
Or Cytherea's breath."—SHAKESPEARE.

ARE we to go into raptures about the VIOLET (*Viola odorata*)? Not a whit more than about any other flower.

It is true that the deep blue of the Violet is beautiful, but we have many an English wild-flower that far surpasses it in colouring. It is true that to human nostrils the scent of the Violet is very grateful, but we must not measure everything by our own senses, and there may be many creatures to whom the flower of the stinging-nettle has an odour as agreeable as is that of the Violet to us. And when we come to examine closely the structure of flowers, we shall find that all possess their peculiar beauties, though some do not appeal so directly to our senses as others do.

In colour it is extremely variable, taking various shades of blue and pink, and often fading into white. It is a hardy plant, the flowers appearing in early

spring, and thereby being doubly welcome to us. Banks of lanes are favourite resorts of the Violet, which hides its flowers so deeply among their dark green foliage, that it is only betrayed by its scent, which cannot be mistaken.



VIOLA CANINA AND V. ODORATA.

The violet is one of the “simples,” and a really useful one, for the root supplies a safe emetic, and the flowers when boiled, can be used for children instead of rhubarb.

THERE are several species of Violet in England, one of the most common being the DOG-VIOLET (*Viola canina*), which grows in similar localities, and is often mistaken for its sweet-scented relative.

Putting aside its larger size and want of odour, it is easily distinguished by its leafy and channelled stem. It does not blossom so early as the Sweet Violet, the flowers seldom appearing until April; but it lasts longer in flower, the blossoms being found even towards the end of July, if conditions be favourable.

In the illustration, both these species are shown, the Sweet Violet being on the right, and the Dog-Violet on the left.

Another familiar Violet is the PANSY, or HEARTSEASE (*Viola tricolor*).

This however, grows rather in fields than in lanes. Gardeners are fond of it, and take a pride in cultivating it, until it attains a very large size, and becomes exceedingly rich in colouring.

This flower is the "Love in Idleness" of Shakespeare.

"Yet marked I where the bolt of Cupid fell;
It fell upon a little western flower,
Before milk-white, now purple with Love's wound,
And maidens call it 'Love in Idleness.'"

I have already mentioned that the typical lane will have a streamlet running down it, and in such lanes, if we look in sheltered spots on the same side as the stream, we may be tolerably certain of finding the RAGGED ROBIN (*Lychnis Flos-cuculi*) or Cuckoo-flower.

Both names are equally appropriate.

The petals of the pretty pink flowers are so deeply cut into four strips, that they look as if they were



RAGGED ROBIN.

accidentally torn, especially when the flower is past its prime. It is called the Cuckoo-flower, because it appears when the cuckoo is in full song. I have, how-

ever, in exceptionally favourable localities, known it to blossom so early as February.

Not very long ago I came upon quite a colony of Ragged Robins at the bottom of a long-abandoned sand-quarry, half-way up a hill. They were so well sheltered, that although the trees above were waving about in a smart gale, their delicate flowers, perched on thin long and slender stems, hardly moved.

There is a much larger species called the RED ROBIN or Red Campion (*Lychnis diurna*), which is common in hedges. It is easily to be distinguished from the Ragged Robin by its petals, each of which is only once cleft, and but half-way down, instead of being torn, as it were, into four narrow strips from the top nearly to the base.

Another species with white flowers, called the EVENING CAMPION (*Lychnis vespertina*), is equally common, and grows in similar localities, sometimes attaining a height of two feet. It derives its popular name from the fact, that although by day it is almost odourless, in the evening its flowers have a pleasant fragrance. The well-known Corn-cockle, with its purple flowers and downy stem, is allied to the Campions.

THERE are several plants which have a capacity for existing in almost any soil, and one of the chief among them is the CHICKWEED. It is plentiful in lanes, fields, gardens, waste places, and, indeed, except that it does not grow under water, it may be found anywhere.

It increases with much rapidity, flowering and

seeding all the year round, so that, if left undisturbed, a large and thick bed will soon be found where only



CHICKWEED.

a single plant had made its appearance a few years previously.

True, each plant has only one year of life, but it sheds so many seeds, that many young plants spring up in the place of their dead parent.

There are several species of this plant, but that which is so useful to canary-fanciers is the COMMON CHICKWEED (*Stellaria média*), which can be at once known by the peculiar hairy line along the stem. All the members of the genus *Stellaria* are popularly called Stitchworts, because they were used as preventives of that unpleasant, but not dangerous, ailment, a "stitch in the side."

HERE is a plant which may be accepted as our typical example of a vast order. It is the common MALLOW (*Malva sylvestris*), so much hated by gardeners, and so much prized by herbalists.

Every one knows the mallow, with its purplish-red flowers, set on stout, branched stems, ranging from two to three feet in height. Then there are its really pretty seed-vessels, generally called "cheeses" by children, and strung into bracelets and necklaces. Mallow poultices have long been celebrated for their use in the cure of bruises, and mallow lozenges are found to be beneficial in allaying the irritation of the throat.

So, as long as the mallow remains in the lane or hedge it becomes a really useful plant, but when it makes its way into a garden it is intolerable, especially when it takes possession of a lawn. The root is shaped like a rather thin carrot, and is so tough, so thick, and so long that to extirpate it is a very difficult task. It cannot be pulled up, because it prefers to

break off close to the root, and then shoot up again. Even if dug out, the turf has to be lifted, a large hole sunk, and then filled up again, with the inevitable result of rendering the turf uneven.

At one time I used to be terribly plagued with



COMMON MALLOW.

mallows, which established themselves so firmly in a newly-made lawn, that I nearly abandoned it to them. However, at last I found a simple and unfailing remedy. Cut down the mallow close to the ground, put on the cut surface a few drops of sulphuric acid, and you will never see that mallow again.

The acid does no harm to surrounding vegetation, but confines itself to the root. If you dig up the root some few days afterwards you will not find much of it, and that portion which is still left, will be quite hot from the acid acting upon the watery juices.

There is no weed which cannot be extirpated by sulphuric acid, and even the dandelions, plantains, daisies, and other plants which are so much in place in a lane, and so much out of place on a lawn, disappear as if by magic. The effect of the acid is most remarkable ; the plant simply vanishes, and leaves no trace, except a few dried and withered leaves that look like half-burned hay, and crumble into powder when touched.

I need not say that the greatest care must be taken with the acid, as it not only kills any plant which it touches, but it corrodes the skin and will destroy clothing. I always employ a long glass tube, drawn to a point at one end, and not quite filled with sulphuric acid. The pressure of the thumb on the mouth of the tube will prevent any of the liquid from escaping, and the fine point of the tube can be accurately directed to any plant which is to be destroyed.

Two persons working in concert, one to cut the plant, and the other to poison it, will produce a magical effect on a lawn in a couple of hours. Many weeds, such as the plantain and daisy, do not require cutting, but it is necessary for such vigorous, strong-stemmed plants as the mallows.

I may mention, by the way, that the tree which furnishes our cotton belongs to the great group of the mallows.

CHAPTER XI.

FLOWERS OF THE LANE—(*continued*).

The Furze, Gorse, or Whin—Its strange constitution—Refuge for birds—Fly-catchers and Bottle-tits—Railway banks—Furze on fire—Tobacco or incendiary?—Peculiar odour of the blossom—Its use as a hedge—The Broom—How the plant sheds its seed—Miniature musketry—Clovers and their varieties—Different Trefoils—Lane-hunting—The knife and the stick—The Sloe or Blackthorn—The “Shilelagh”—How to choose a stick—Origin of the Plum—Power of cultivation—Sloe-juice and Sloe-leaves—The Rose tribe—The Dog-rose—Its value in “budding” roses—The seed-vessels, or “hips”—Conserve of roses—Pipe-stems—The Sweet-briar or Eglantine—Apples and Pears—The Blackberry or Bramble—Its varieties—The Dewberry, and mode of distinguishing it—The Raspberry—The Hawthorn, Whitethorn or May—Hawthorn hedges—A treacherous plant—Its many uses—The fruit, or “haws,” winter food of birds.

THE FURZE, GORSE, OR WHIN (*Ulex Europæus*), affords a strange mixture of hardihood and capricious delicacy. Perhaps there is no country in which it thrives so well as England, where it forms part of the hedges in nearly every lane, grows in patches in many a pasture-field, and in uncultivated ground often covers whole acres with its yellow, perfumed blossoms.

Yet it dwindles away in warmer climates, and in very cold regions will not grow at all, although it can withstand the severest frosts, provided that they be

occasional. Even in our own country it is not to be found in the most elevated regions.

Many a bird makes its home in the furze, and if any one wishes to find the nest of a fly-catcher or a bottle-tit, he cannot do better than search the furze bushes.

Sometimes it covers railway banks, very much for their good, as its roots bind the soil together, and prevent the banks from falling.

It dislikes a very hot summer, and a long continuance of sunshine checks its progress, and makes it so dry that it readily takes fire. There is scarcely a furze-clad railway bank where the bushes have not been entirely or partially burned by sparks from the engine, fanned into flame by the draught of the rushing train.

When it grows on fields or commons it is very apt to take fire, and then affords a good sample of the burning plains of America and Australia. The fire sometimes extends to the turf below, and will then smoulder for a long time, its peculiar peaty odour



COMMON FURZE.

being perceptible at a distance of several miles. Mostly, these fires are attributed to wilful incendiarism, or to the remains of gipsies' fires. I think, however, that tobacco is the principal cause of them. A man, for example, knocks out the ashes of his pipe on a windy day. The little lump of burning tobacco is caught by the wind, and whirled away, as can be better seen by night than in the daytime. Should it fall among a patch of dry furze, it will be at once fanned into flame by the wind which brought it, and will set fire to the furze.

I have even known houses to be imperilled by such fires, and the soldiery to be called out before the flames could be completely extinguished. One of the chief dangers of such fires is their power of smouldering for days during still weather, and bursting out afresh when wind rises.

We know how the odour of many flowers resembles articles of human food. The scent of the yellow water-lily, for example, is so like that of brandy and water that it might deceive a blind person ; and that of the garden heliotrope is commonly called by children "cherry-pie," because its perfume exactly resembles that of their favourite dainty.

Supposing that any one were to shut his eyes, and a bunch of furze-blossoms were presented to his nostrils, he would be almost sure to think that he was smelling a newly-opened cocoa nut, so exact is the resemblance of the two odours.

Next to holly as a hedge I should prefer furze, its numerous thorns making it almost as impermeable as the well-known "prickly pear" hedge of the tropics.

If planted on favourable ground, it will reach a height of twelve or fourteen feet, but for the purpose of a hedge it must be carefully clipped down to eight or nine feet, as it is apt to become bare of leaves near the roots, and so to permit inquisitive persons to peep between the stems, though they cannot force their way through them. Such hedges should be composed entirely of furze, as it is apt to produce a ragged effect when mixed with other shrubs.

MUCH which has been said of the furze holds good with the common BROOM (*Sarothamnus scoparius*), which I believe to be the only British

species of its genus. It is not, however, to be recommended for hedges, as its long and slightly-



COMMON BROOM.

leaved branches give but little protection from wind or intrusion. The large yellow flowers of the broom are in best condition about Midsummer, but they are of very short duration, and give way to long narrow pods. In autumn the pods turn black, and when they are quite dry, they split open from end to end, and scatter the seeds on the ground. On a hot, sunshiny day in the middle of autumn a very curious effect is produced by the seeding of the broom. The pods fly open with a sharp pop, projecting the seeds to some distance. Should there be many broom plants in the locality, the reports of the innumerable pods on every side produce a crackling sound like that of distant musketry. The same phenomenon may be observed in the furze.

As to the CLOVERS, they are too numerous to be described, and too familiar to need much description. Every one knows a clover when he sees it, though he may not be able to state its species. Several species are cultivated as green fodder for cattle, and are equally useful when dried like hay.

Children and bees are equally fond of the clover, on account of the abundant sweet juice in the long tubes of the flowers, which are sucked by children for the gratification of their palates, and emptied by bees for the purpose of converting the juice into honey. This juice adds greatly to the nutritious quality of the clover, both when fresh and dry. Cattle, however, must be kept away from green clover, as they will feed greedily upon it, and be certainly attacked with the painful and often fatal disease called the "hoven."

Four of our British clovers are given in the illus-

tration. The largest is the White, or Dutch Clover (*Trifolium répens*), which is rather variable in colouring, its green leaves sometimes having a white line down the centre, and now and then a dark spot



TRIFOLIUM STRIATUM, ETC.

The soft KNOTTED TREFOIL (*Trifolium striatum*) is common in dry places, and may be known by the light purple flowers, and the silky down with which the plant is covered.

The HARE'S-FOOT TREFOIL (*Trifolium arvense*) derives its popular name from the coating of soft downy hair upon the heads. Its flowers are small, pale pink in colour, and almost concealed among the down.

Lastly, there is the SUBTERRANEAN TREFOIL (*Trifolium subterraneum*), so called on account of its habit of bending its head to the ground when at maturity, sending out little root-like fibres, and so actually burying the seed before it is detached from the plant. It may be found on dry banks, and is tolerably common. The flowers are white. It is quite a small plant, seldom exceeding three inches in height.

LANE-HUNTING is always a favourite occupation with those who have once tasted its sweets, and each season brings with it a peculiar enjoyment of its own.

Now, although the lane-hunter does not need costly apparatus, and indeed, although this book is framed on the supposition that he has not even a magnifying-glass, he will yet need one or two articles, the chief of which are a stout knife and a stick. The former can be procured for a shilling, and the latter by means of the former.

So with the knife in his pocket the lane-hunter has only to hunt the lane in order to procure his stick. For this purpose he cannot do better than search for a SLOE, or BLACKTHORN (*Prunus spinosa*).

The best time of year is at the beginning of winter, when the leaves have fallen and the branches can be better seen than in the summer. There is no better stick than a blackthorn, which is tough, very strong, and

withal is heavy enough to serve as a very formidable weapon in case of need. The celebrated "shilelagh" of Ireland is made from the blackthorn.

Some judgment is required in choosing a stick, which ought to be carefully examined on all sides



SLOE.

before it is cut. Branches assume the most curiously different aspects from various points of view, and not until it seems suitable after a careful examination should it be cut. Always cut the stick at least a foot longer than will be needed, and if possible trim it

roughly, and let it season for six months at least, before it is finally shaped.

Beware of the thorns while cutting it, as if one of them should happen to pierce the wrist-joint, a dangerous wound might be the result. The popular name of blackthorn is evidently derived from the very dark colour of the bark.

When employed for making sticks it is generally called the blackthorn, but when its fruit or leaves are mentioned, the name of sloe is invariably employed.

Not only is the sloe one of the plum-tribe, but it is thought to be the origin from which all our plums, bullaces, greengages, &c., are developed by cultivation.

Certainly the power of cultivation is great, for there is no better fruit than a really good plum or greengage, and anything more distressing to the palate than the juice of the sloe cannot well be imagined. Even when first bitten it is so sourly rough, that it twists the face into involuntary and very ludicrous contortions. As to masticating a sloe, tiny though it be, it would be simply torture. Moreover, the roughness remains obtrusively on the tongue for some time afterwards, and will not allow itself to be forgotten.

In consequence of this character, the sloe is used by dishonest traders in imparting an artificial roughness to adulterated wines. The leaves possess somewhat similar properties, and have been largely employed in adulterating tea.

Now we come to a group of the Rose-tribe, the first of which is the DOG-ROSE (*Rosa canina*).

It is hardly fair to the dog that its name should be so universally employed in order to indicate inferiority. But so it is, and we have the dog-violet, the dog-rose, the dog-whelk, &c.



DOG-ROSE.

Although the dog-rose is but a wild-flower, it is often taken from its native hedges and planted in gardens. Here its branches are cut off and "budded" with cultivated roses, the "stock" being of very sturdy growth, and answering admirably when

the roses are desired to be of the "standard" character and not to be trained over trellises.

The large, oval, red, and polished seed-vessels which appear in autumn are very familiar under the name of "hips." There is a sweetish pulp within them, and they can be made into a sort of jam with slight medicinal qualities, and known as "Conserve of Roses." The stems are used in the East for making pipes.

The SWEET-BRIAR or EGLANTINE (*Rubus rubiginosus*) is closely allied to the dog-rose, and is deservedly prized on account of the exquisite perfume of its leaves.

All the cherry, strawberry, apple, and pear-tribe belong to the roses, and the tribe is so numerous that we can only afford a short notice of a few of them.

EVERY ONE knows the BLACKBERRY or BRAMBLE (*Rubus fruticosus*), with its well-known fruit, first green, then red, and lastly black. There is a popular saying to the effect that the blackberry is never thoroughly ripened until after the first frost.

The plant is a great favourite with entomologists, because so many insects throng to it; some to feed on the leaves, some to eat the fruit, some to suck the flowers, and some, such as the dragon-fly and the wasp, to catch the insects that are engaged in feeding.

How many species or varieties of blackberry there may be, I do not venture to say, because I do not know, and have no means of knowing. Some botanists, and I am inclined to agree with them, say that there

is really only a single species, and that the other apparent species are merely varieties like those of the dog, pigeon, poultry, &c.



BLACKBERRY.

There is, however, the DEWBERRY (*Rubus cœsius*), which really is a distinct species. It may be easily distinguished from the blackberry, because the "drupes," as they are called by botanists, or "blobs,"

as they are known to boys, are large ; few in number, have a greyish "bloom," are very full of acid juice, and almost sunken in their green envelope. I have always found the dewberry in its greatest perfection



HAWTHORN.

under the overhanging southern banks of rivers, where it finds shelter from the wind, plenty of sunshine, and an unfailing supply of water.

In such places it much exceeds the blackberry in

size, and ripens earlier. The raspberries belong to the same genus, but are seldom found wild, except in woods.

THE well-known HAWTHORN, WHITETHORN, or MAY (*Crataegus oxycantha*) is sufficiently abundant to form the staple of hedges, both in lanes and fields; it is often employed in artificial hedges, but I do not recommend it. In many ways it is well adapted for the purpose; growing freely and thickly, giving shelter and food to birds, and keeping out intruders by its innumerable thorns. But it has one great fault; without the least apparent cause, and without giving warning, it will die, thus leaving in the hedge an ugly gap which can never be satisfactorily filled up.

The sweetish, pulpy, stony fruit which it bears is well known under the name of "haws," and these, with the "hips" of the wild roses, and the berries of the mountain ash, form no small amount of the nourishment of our English birds during the winter.

CHAPTER XII.

FLOWERS OF THE LANE (*concluded*).

The Ivy—Popular errors concerning the plant—Protection for walls and birds—The picturesque easily attained—Planting the Ivy—Paint and stucco—The Elder—Superstitions about the tree—Elder wine—Fragrance of the flowers—Boys and pop-guns—Use of the pith—The Honeysuckle—Origin of its scientific name—The Honeysuckle and walking-sticks—Wire *versus* Honeysuckle—Goosegrass—Cleavers—Practical jokes—Groundsel and its uses—Ignorance of botany—The Ragwort and the insects—The Cinnabar moth—Privet and the privet-moth—Privet hedges—Bindweeds—The Woody Nightshade—Its poisonous character and attractive berries—The Deadly Nightshade—Henbane—The Fox-glove—The Speedwells—Wild Thyme—Sweet herbs—Dead Nettles, and how to distinguish them—The Stinging-nettles—Structure of their stings—Suitability for the table—The gardeners of Dreepdaily—The Plantains—Their use to bird-keepers—Plantains in gardens—The Black Briony—Yams—Poisonous nature of the plant.

A LANE without IVY would hardly be deserving of the name, but I very much doubt if there be such an unpleasant phenomenon as an ivy-less lane.

Only one species of Ivy (*Hedera helix*) is a native of England, although the plant is exceedingly variable in the size, colour, and shape of its leaves.

I have a great love for the ivy, and encourage it

wherever I can find an opportunity. It does no harm, but it does unmitigated good. Ignorant people think that it ought to be destroyed because it strangles trees, and eats away the brick and stone of walls, and so they cut it down wherever they find it.



COMMON IVY.

Now, it cannot strangle a tree. If it twisted round a tree, as do the honeysuckle and the bindweed round their supports, it might do much damage ; but it never twines, and if the reader will examine either the tree or wall up which ivy is creeping, he will see that

its leading branches run in straight lines up either tree or wall, and never by any chance twist round either the trunk or branch of a tree.

Then, it is thought to suck out the sap from trees, and destroy the material of walls by means of its little rootlets. Now, on examination, these so-called rootlets will be seen to be nothing but little claspers, which support the plant, but give it no nourishment. The ivy draws all its substance from the ground, and if it be severed, the whole of the plant above the cut will die.

The same rule holds good with regard to walls, and, so far from injuring them, it forms their best protection. In the first place it keeps them dry, and defends them from their two dread foes, the wind and the rain. The rain may beat as fiercely as it will against an ivy-clad wall, and scarcely a drop will touch the brick or stone. The birds are perfectly aware of this fact, and the numbers of them which build their nests or settle for the night in the ivy is almost incredible to those who have not watched them.

It is innately picturesque, not only in the graceful outlines taken by its clustering and drooping masses when they are allowed to grow without interference, but by the bold contrast of light and shade afforded by its leaves. It hides ugliness, and enhances beauty. The meanest, plainest dead-wall, with which the Government delights in enclosing its docks, barracks, and arsenals, can be deprived of their depressing, repellent aspect, and be made absolutely attractive, by the free use of ivy. Every one knows how the picturesqueness of an ancient castle is increased by masses

of ivy, and I wish that every one knew that ivy will even make a speculative builder's "villa residence" look picturesque. A better proof of its powers cannot be given.

Then, it makes the walls waterproof. This is no trifling advantage, considering that the bricks which are forced upon us by trade unionism will suck up water as if they were nothing but so many sponges, and so cause the wall-papers to peel off with the damp ; boots, shoes, books, &c., to become mouldy ; iron and steel to be covered with rust ; and rheumatism, fever, and other ailments to take possession of the inhabitants.

There is nothing easier than to plant ivy. Go into the lane, pull up an armful of the branches next the ground, lay them flatly along the wall, scratching a little groove for them if you like ; put a handful of earth upon them at every few inches, and leave them. They will need no aid. They will make their way up the wall by themselves, and in a wonderfully short time will cover it to the very roof ; but the wall must be either brick, stone, or wood ; stucco and paint the ivy rejects, and where either is present there will be no ivy. Starlings among birds, and ivy among plants are my chief favourites, and I only wish that their numbers were infinitely multiplied.

THE well-known ELDER (*Sambucus niger*) is remarkable for many points.

Formerly, even in England, it was viewed with a sort of superstitious reverence among the uneducated classes, and at present in many parts of the Continent there is such a dread of it that no one will cut or

roughly, and let it season for six months at least, before it is finally shaped.

Beware of the thorns while cutting it, as if one of them should happen to pierce the wrist-joint, a dangerous wound might be the result. The popular name of blackthorn is evidently derived from the very dark colour of the bark.

When employed for making sticks it is generally called the blackthorn, but when its fruit or leaves are mentioned, the name of sloe is invariably employed.

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In consequence of this roughness is used by dishonest traders for the purpose of giving a roughness to adulterated goods. It is not, however, what similar goods are employed.

It is hardly fair to the dog that its name should be so universally employed in order to indicate inferiority. But so it is, and we have the dog-violet, the dog-rose, the dog-whelk, &c.



DOG-ROSE.

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Such stems are valued for walking-sticks, but the dealers are apt to forge even walking-sticks, in default of the honeysuckle, by twisting stout wire round a growing branch.



HONEYSUCKLE OR WOODBINE.

HERE we have an unfailing inhabitant of our lane, the common GOOSEGRASS (*Galium aparine*), so called because geese are fond of it when it is young and tender.

It is a great favourite with children, who love to pelt each other with the round seed-vessels. These are covered with tiny hooks, which cling so firmly to any object on which they may be placed, that they are popularly named cleavers.

In my childhood it used to be a cherished amusement to fill our hands with cleavers, lie hidden in a convenient lane, discharge the contents of our pockets over the hat and coat of the first gentleman who passed, and then escape before he had realized what had happened to him.

There are many species of these plants, which are sometimes called by the name of bedstraw, but I should fancy that a less comfortable bed could hardly be found than

the rough prickly stems of the Galium. It is not an agreeable plant for a garden, but in a lane it is extremely picturesque, having its clusters of long creeping stems in every point where it can find a hold. Bedstraw is a corruption of Beadstraw.



GOOSEGRASS.

WHAT would canary fanciers do without GROUNDSEL (*Senécio vulgaris*), so plentiful and beneficial to their little pets ?



GROUNDSEL.

I really thought that every one knew the groundsel, but found myself mistaken. When living in the heart of London I went to visit a friend in the country, and asked whether his garden had been so carefully

weeded that I could not find some chickweed or groundsel for my birds.

He gave me full permission to hunt for myself, but neither he nor his wife, though both well known in the literary world, knew the groundsel, chickweed, plantain, or, indeed, any wild flower.

The accompanying illustration shows the chief points of the groundsel, namely, the deeply-cleft and notched leaves, the expanding flowers, and the ripening seed. A very much larger species of the same genus, the RAGWORT (*Senecio jacobæ'a*), often attains a height of three feet, and is noticeable as supplying food to the yellow and black caterpillar of the beautiful scarlet and black cinnabar moth, which has its colours exactly alike on the upper and under surface, and which is so plentiful, and, at the same time, so curiously local. We shall again refer to the Ragwort.

Now we come to an essentially lane and hedge inhabitant, namely, the common PRIVET (*Ligustrum vulgäre*).

Many plants have their names indissolubly associated with those of insects, and no entomologist can hear the name of this shrub without being reminded of the privet moth, one of the largest and handsomest of our British insects.

Its caterpillar, which may be found, especially towards dusk, is scarcely less beautiful than the moth itself. It is as large as an ordinarily-sized middle finger, and is green in colour, with seven purple white-edged streaks drawn diagonally on each side. There is a black, curved, and sharply-pointed horn at the

end of the tail, but it is not intended as a weapon, and the creature is perfectly harmless.



PRIVET.

The privet is a useful plant for a hedge to a garden, as it grows rapidly and densely, so as to be quite impervious to sight. It requires, however, constant

clipping to keep it in proper order, as otherwise its branches become thin and ragged-looking. The flowers are white, and the round berries are black.

We cannot pass through the lane without noticing the BINDWEEDS (*Convolvulus*), which twine themselves, amid the hedges, and flaunt their beautiful but short-lived flowers among the foliage.

There are several species of Bindweed, which have earned their popular name from their habit of twining their slender stems round small tufts of grass and other weeds, and binding them firmly together.

There are two British plants which bear an evil name, and one, at all events, deserves it. These are the Nightshades, one of which, the WOODY NIGHTSHADE, or BITTER SWEET (*Solanum dulcamara*), is sure to be found in every lane. It is closely allied to the potato, as may be seen by a cursory inspection of both plants. I may mention that the well-known capsicum plant, which furnishes our valuable cayenne pepper, is also one of the great Nightshade tribe, as is the tomato.

The Woody Nightshade is so called, not because it inhabits woods, but because its stem is of a woody character. It is a quick-growing plant, and its slender climbing stems will often be found exceeding seven or eight feet in length. The rather pretty purple flowers, with their conical yellow anthers, are succeeded by shining scarlet berries, which have a mingled flavour of bitter and sweet, and are attractive to children. As these berries are poisonous, it will be

always safer to remove the plant from any lane which children are likely to traverse.



WOODY NIGHTSHADE.

Its still more poisonous relative, the DEADLY NIGHTSHADE ('*Atropa belladonna*'), is not so common, but now and then makes its ill-omened appearance in

our lanes, though as a rule it prefers old ruins, deserted quarries, and similar localities.

There is something positively ominous in the look



DEADLY NIGHTSHADE.

of this plant, with its luridly purple flowers, and large black berries. Unless it be needed for strictly botanical or medicinal purposes, it should be destroyed.

whenever seen. Physicians and surgeons use it when they wish the pupil of the eye to be much dilated, so that they can see into the interior of the organ.



HENBANE.

The poisonous HENBANE (*Hyoscyamus niger*) belongs to the same group, and may be known by the

cream-coloured flowers, each with a dark eye and purple veins. As it prefers waste places, it is not often touched by children.

Opinions are divided as to the origin of the name Foxglove, but that which is most generally accepted is, that the word is a corruption of Folk's-glove, *i.e.*, the glove of the "good folk," or fairies.

Whatever may be the real derivation of the name, we have no handsomer flower in England than the FOXGLOVE (*Digitalis purpurea*), which in favourable soils will reach six feet in height, on which are ranged the beautiful red-purple flowers, with their rich array of spots in the interior. Now and then a white variety may be seen, just as is the case with the violet and several other dark flowers.

The sloping banks of lanes are favourite spots with the Foxglove ; and when, as sometimes happens, a large group of these splendid flowers is allowed to



FOXGLOVE.

grow unchecked and untouched, they afford so gorgeous a spectacle that they remind travellers of the tropical plants which they have seen in hotter countries.



WILD THYME.

From the gorgeous and magnificent Foxglove we pass to the lowly and pretty Speedwell. There are many British species of these plants, but we accept as a type the GERMANDER SPEEDWELL (*Veronica chamædrys*), sometimes called the Blue Bird's Eye.

It may easily be known by its pretty blue flowers, and especially by the two very distinct lines of hairs on the stems, which run on the sides of the stem until they reach a leaf, when they change to the opposite side. At the next leaf they change back again, and so on.

Every one knows the Thyme, which is so often cultivated in gardens, together with mint, sage, marjoram, &c., though very few people seem to know that the plants can be found in the lanes and fields, and that they are only cultivated for the sake of convenience.

There seems to be only one British species of this plant, namely the WILD THYME (*Thymus serpyllum*), which has been immortalized by Shakespeare's song in the "Midsummer Night's Dream,"

"I know a bank whereon the wild thyme grows."

And that is just the place to find the wild thyme. It loves dry banks, and so do its companions in the song, the oxlips, and the nodding violet, and there it can be plucked in any quantity, being betrayed, especially on a hot summer's day, by the well-known fragrance of the leaves.

I shall now pass to two plants which are popularly called Nettles, though one scarcely deserves the name, and for the sake of convenience will take them in succession, though they belong to different groups. The first is the RED DEAD NETTLE (*Lâmium purpureum*), one of a rather large group of plants. Some of

them, especially the white-flowered species, very much resemble the stinging-nettles, but as they have no



RED DEAD NETTLE.

poisoned hairs, they are called Dead, or Dumb *Nettles*.

They exist in the greatest profusion in the lane, and are very acceptable to the practical entomologist as food for the caterpillars which he is breeding. Should he find a strange caterpillar and not know its food-plant he will generally be right if he offers it some dead-nettle, whether white or red. The number of these nettles which the caterpillars will consume is quite amazing.

When I was at college I bred the tiger-moths largely, in order to procure specimens for dissection, and used to pay one of the servants to bring the food for them. Every morning and evening he used to bring a large armful of dead-nettles, and so voracious were the caterpillars that when the morning supply arrived, scarcely a leaf remained of the bundle that had been given to them on the previous evening.

There is no difficulty in distinguishing the dead-nettle, its stalk being square instead of round. This peculiarity is not well shown in the illustration.

Now for the STINGING-NETTLE (*Urtica dioica*), so well known from the envenomed hairs with which it is profusely covered.

These hairs are made almost exactly on the principle of the viper's fang. They are hollow, have a poison-gland at the base, and so convey the venom into the wound.

If examined with the help of a microscope, each hair will be seen to have its tip guarded with a tiny ball, which acts as a stopper, and prevents the poison from escaping. When ever so slightly touched, the knob breaks off and the sharp point of the sting

then is enabled both to make a wound and inject poison into it.

In spite of these stings there is scarcely a plant which is more favoured by insects, and, as I have



GREAT NETTLE.

already mentioned, those of the beautiful *Vanessa* butterflies seem to prefer the stinging-nettle to any other food.

It seems a pity that we ourselves should so systematically neglect the stinging-nettle as a vegetable. If we may accept the authority of Mr. Andrew Fair-service, of Dreepdaily, where they forced the early nettles for spring kale, our Northern neighbours know the virtues of the plant better than we do.

Still, there are some who know by experience that young nettle-tops are quite as good in their way as turnip-tops or spinach; and that nettle-broth is a valuable medicine in cases of influenza.

There is another species equally common, namely, the SMALL NETTLE (*Urtica úrens*). If possible, it is more annoying than its larger congener. Any one can see and avoid an ordinary stinging-nettle, but the small nettle lurks unsuspected among the herbage, and is often felt before it is seen.

Now we will revert to one of our commonest flowers of the lane, namely, the Plantain. There are several British species of this plant, from which I have selected the RIBWORT PLANTAIN (*Plantágo lanceoláta*) as a type of the group.

Plantains grow profusely in every lane.

They are troublesome weeds in gardens, whence, by the way, the sulphuric-acid treatment already described will soon expel them, but they are useful in lanes, if only for the reason that their seeds afford excellent food for small birds.

The best species for this purpose is the GREATER PLANTAIN (*Plantágo major*), whose long cylindrical seed-spikes are sold largely in bird-shops. The worst species for the garden is the HOARY PLANTAIN (*Plan-*

tágo média), whose leaves lie flatly on the ground like stars, and allow nothing to grow beneath them. For this reason they are simple destruction to lawns.



RIBWORT PLANTAIN.

Boys often pluck the flower-stems and play "conqueror" with them, each trying to knock off the head of his opponent's plantain.

The hedges of English lanes would seem incomplete without the BRYONY (*Tamus communis*), of which there is only one British species. In tropical



BLACK BRYONY.

countries, however, there are many species of bryony, one of which (*Dioscúrea*) is notable as producing the celebrated Yam.

The accompanying illustration will enable any one to identify the bryony, whose long trailing branches climb in wild profusion among the hedge-branches, bearing with them the conspicuous green glossy leaves, with their bold veinings.

The flowers are green, small, and inconspicuous ; but the berries which succeed them are nearly as large as currants, oval, and shining red. Being poisonous, children must be kept away from them. The plant is a perennial, but its branches die down to the root in the winter, and are developed again in the following spring.

CHAPTER XIII.

FIELD FLOWERS.

Mosses, Ferns, Fungi, Lichens, and Grasses not included in the book—The Buttercup—Its acrid juice—Avoided by Cattle—Buttercup mats—The Celandine—Its starry flowers and time of blossoming—The Red Poppy—Coquelicots and coquetry—The White Poppy—Opium and Poppies—The Cherlock—Rustic song—Weeds and Seeds—The Wild Mignonette—The Dyers' Rocket—Tares—The "Tares" of Scripture—Wheat and Darnel—Vetches—The Tufted Vetch—The Common Vetch—The Meadow-sweet—Queen of the Meadows—Banks of the Isis—Size and fragrance of the Meadow-sweet—The Earth-nut or Pig-nut—Caliban—The Pig-nut edible—How to obtain it—The Chervil—The Teasel—Its curious seed-vessels—The elastic hooklets—Use in making cloth—Butterflies and Teasels.

CHANGING from the lane to the field, we will take note of a few plants which we are sure to find in almost any part of England.

Forest-trees do not come within the scope of this work except as far as they bear directly upon the lane or the field; neither can it include the mosses, ferns, fungi, and lichens.

Only those plants which bear flowers can be noticed, and of them it will be needful to select only the

typical examples which will be found in a walk through the fields. As to the grasses, they cannot be even enumerated. Upwards of a hundred species are known, and they would require a volume to themselves.

First of the field-flowers comes the common BUTTERCUP (*Ranunculus bulbosus*). There is another species (*Ranunculus acris*) which is equally common in fields and meadows.

Children are very fond of the buttercup, and know that they can always procure it, even when it grows in cattle pastures. Neither cow, horse, nor sheep will touch it, and with good reason, as any one will say who has had the curiosity to bite a leaf.

There is one very pretty use to which the petals can be put.

They should be gathered when the flower is at its best, care being taken that the edges of the petals are not torn or notched, and that all are as nearly as possible of the same size. As they are plucked they should be gently pressed and dried, so that they are quite flat. It is a good plan to arrange them between the leaves of a book, and to place them all with their polished faces downwards.

When a sufficient number have been collected and thoroughly dried, they should be laid on a piece of white paper face downwards, and arranged upon each other in concentric circles. If their faces be damped as they are laid, they will adhere firmly to each other without needing any kind of cement. Care must be taken that the bases of all the leaves point exactly to

the centre of the circle. When the circle is completely filled, the "mat," as we may now call it, must be again pressed and dried.

With a little pains the mat can be separated from the paper, and will be a wonderfully pretty object, especially when held up to the light. Considering the delicacy of materials, it is wonderfully strong. I have one before me which I made just thirty years ago, and it is as perfect both in colour and form as when the petals were first gathered.

Another flower of somewhat similar shape and hue is often confounded with the buttercup.

This is the CELANDINE (*Ranunculus ficaria*), which, however, can be easily distinguished by the greater number of its narrow-pointed petals, which give to the flower a star-like appearance.



BUTTERCUP.

It may be found equally in lanes and fields, and is always welcome, as being one of the earliest flowers



CELANDINE.

of the spring. It has not a very long time of blossom, seldom lasting into the summer, when its place is taken by the buttercup. Celandine flowers may generally be seen in March, and in a favourable season will sometimes make their appearance towards the end of February.

No one can mistake the RED POPPY (*Papáver Rhæas*), which blazes in scarlet beauty over our meadows, and sometimes takes possession of our corn-fields so completely that we scarcely know whether the corn-fields are infested by poppies, or the poppy-fields invaded by corn.

In France the red poppy is called by the name of Coquelicot, and is a general favourite. When I was living in Paris a large party used to spend a day in the country once in every week. The ladies always



COMMON RED POPPY.

pounced on the coquelicots, and after they had twined as many as they wanted in their hair or bonnets, they used to pluck the petals, gather their edges together between the finger and thumb, so as to form little scarlet bags, and then explode them by a smart blow against the foreheads of the gentlemen.

Most people know that opium is made from a species of poppy, but they do not generally know that the WHITE POPPY or OPIUM POPPY (*Papáver somníferum*) is a native of this country. It cannot be



CHERLOCK.

mistaken. There is no other English poppy like it, the large white petals, with their purple bases, distinguishing it at once.

When the seed-vessel is nearly ripe, if it be slightly wounded, a white milky juice appears. It soon dries, turns black, and can be easily scraped off with a blunt knife, and is then the opium of commerce.

There is a quaint and very excellent West-country song,

which begins, if my memory is correct,—

“ Oh, the Charlock voine is a zight to zee,
As it zhines in the yeld like gowld.”

The singer proceeds to remark that, according to the parson, who is evidently his supreme authority in matters of learning, all that shines is not gold. He then tells the parson that the charlock is a trouble-

some weed, that it will insist on forcing its way into corn-fields, that the more it is cut down the faster it grows, and that he is quite in despair about it.

However, he takes courage after his conversation, and determines that he will conquer the charlock after all. I again quote from memory :—

“ But Parson says that every weed
Must all come aout of a kind o’ zeed :
Zo, I wunt let un zeed, if I kneaows.”

The CHERLOCK (*Sinapis arvensis*) is the wild mustard, which is one of the most pertinacious of weeds. There is no calculating upon its vagaries, for, supposing that the farmer begins to cultivate a new piece of ground, where not a single cherlock is to be seen, it will soon be covered with the plants, which have evidently sprung from seeds that had been long buried, and which had been restored to warmth and light by the ploughshare.

So there is no effectual mode of extirpating it, except that which is recommended in the song, namely, cutting it down before it has time even to flower. It is more common in corn-fields than in any other localities, and may even dispute with the red poppy the possession of the field.

The accompanying illustration will enable the reader to distinguish the WILD MIGNONETTE (*Reseda lutea*) as soon as he sees it.

It is a large and strong plant, reaching a height of three feet, or even more in favourable localities. The numerous flowers are greenish-yellow, and have no fragrance like those of the garden mignonette, which is not indigenous in this country. Sometimes the

Resédas are called Rockets, and one of them (*Reséda luteöla*) is named the Dyer's Rocket, because it furnishes a good yellow dye.



WILD MIGNONETTE.

It is to be found plentifully in the neglected parts of fields and meadows. Abandoned gravel-pits are

nearly sure to produce it, and if a garden be neglected the wild mignonette will make its appearance. There is such a garden within a few yards of my present house, and, although it has only been unoccupied for a few years, it is filled with large patches of the Reséda.

Much confusion has been caused in the minds of many readers of Scripture by the parable of the Tares. They cannot understand how field-labourers could for a moment hesitate in separating the tares from the wheat, the two plants being so utterly unlike each other.

Neither can they understand why so valuable a plant as the Tare should be burned as useless.

This confusion is caused by the unfortunate translation of a Greek word as Tares; whereas it ought to have been Darnel. The DARNEL (*Lolium temulentum*) is a grass, the seeds of which are poisonous. When it has newly sprung up, the blades of wheat and darnel so closely resemble each other, that to separate them before they were fully developed would be almost impossible, and any one who tried to do so would be quite as likely to pull up the wheat as the darnel.

The TARES, as we understand the word, belong to the Vetches, and are most useful plants, especially as fodder for cattle, being cultivated on a large scale for their own sake.

There are more than twenty British species, and out of them I select one of the most conspicuous, namely, the TUFTED VETCH (*Vicia cracca*), which may be found in almost every hedge.

During the summer it is a great ornament to the hedge, as it climbs among the branches, holding



TUFTED VETCH.

firmly by its little tendrils, and waving its spikes of blue and purple flowers in the wind.

The species which is usually cultivated is the COMMON VETCH (*Vicia sativa*), which is a much smaller plant, the stems rarely exceeding two feet

in length, clustering together, and too feeble to raise themselves far from the ground.



MEADOW-SWEET.

Here is one of our best-known flowers, named

appropriately the MEADOW-SWEET, or QUEEN OF THE MEADOWS (*Spiræa ulmária*).

It is seldom found on elevated spots, preferring the damp meadows of low-lying counties, such as Oxford, Lincoln, and the like. The Isis, for example, together with its subsidiary streamlets, is in many parts fringed with the meadow-sweet, whose fragrance is much appreciated by water parties, especially if composed of strangers.

In such localities it will attain a height of four feet, and is so strong-stemmed that it seems to be aspiring to the rank of a shrub. The roots are so firmly fixed that I have often made my skiff fast to the plant when examining the banks.

The flowers are small, very numerous, yellowish-white, and so fragrant that a bunch of meadow-sweet gives out a perfume which is almost too powerful for a room.

Keeping to the low-lying fields, we may often find a flower, which promises little, but performs much. This is the EARTH-NUT, or PIG-NUT (*Búanium flexuosum*), immortalized by Shakspeare in the "Tempest":—

"CALIBAN. I prithee, let me bring thee where crabs grow,
And I, with my long nails, will dig thee pig-nuts."

Some books say that pig-nuts are only good for pigs, but I cannot agree with them. In my school-boy days pig-nut hunting was almost always one of the objects of a summer half-holiday. The plant is quite a small one, barely a foot in height, and having white flowers.

If the earth be carefully dug away with a knife, a rather long, delicate root will be found, descending perpendicularly, and being curiously waved, like a flattened corkscrew. Near the end of the root is the pig-nut, looking very like a small potato, and having a thin skin, which can be readily stripped off with the knife.

The "nut" is hot and fragrant, something like a turnip-radish, and quite as eatable. It is said to be best when boiled, but in my young days we thought that the pig-nut, when simply dug up and eaten on the spot, was quite good enough for us.



COMMON FIG-NUT.

Several British plants go by the name of Chervil, among which is the Cow-parsley, so useful to rabbit-keepers, who know how to distinguish it from the hemlock, which it much resembles, except that its stem is not spotted.

The ROUGH CHERVIL (*Cherophyllum temulentum*) is shown in the illustration. It has a purple-spotted



CHERVIL.

stem, and there seem to be some doubts as to the harmlessness of its character.

The plant may generally be found in hedges, and may be known by the manner in which the hairy stem is swollen beneath the joints. The flowers are white, and, as may be seen by the illustration, they droop while in the bud, but stand out boldly when fully blown.

Essentially inhabitants of the fields, the Teasels claim our attention for awhile.

The most celebrated of this group is the FULLER'S TEASEL (*Dipsacus fullonum*), which, although, perhaps, not an indigenous plant, has contrived to acclimatise itself sufficiently to be found wild in our fields.

After the seeds are developed, they will be found to be armed with slender, sharp-curved bristles, which were used for the purpose of raising the "nap" upon cloth. Now, however, machinery has been invented which answers the same purpose, and so the teasel has lost its importance.

The English WILD TEASEL (*Dipsacus sylvestris*) has its seeds similarly armed, except that the bristles are not hooked, and consequently it has never been used in the manufacture of cloth.

It is a splendid plant, often attaining a height of six feet, and bearing aloft its groups of purple flowers.



TEASEL.

These flowers are favourite resting-places of many of our finest butterflies. It lasts for two years and flowers after midsummer.

CHAPTER XIV.

FIELD FLOWERS (*continued*).

Composite flowers—The Goat's-beard—Its winged seeds—Salsafy—The Sow-thistle—Chicory—Rabbit-keeping—The Dandelion—Its uses to man—How to distinguish it—Its seeds—Meaning of its name—The Burdock—How it is disseminated—Sheep and Burdocks—Misfortunes of a Skye-terrier—The Musk-thistle—The Scotch thistle and motto—The Corn-cockle—The Star-thistle—Calthrops and their object—The Colt's-foot—Its favourite localities—Its use in medicine—Colt's-foot lozenges—Tobacco and Colt's-foot—The Ragwort—The Cinnabar Moth—The Daisy—Wild Chamomile or Feverfew—Its medicinal properties—The Ox-eye—Chamomile tea—Chrysanthemum shows—Yarrow, or Milfoil—Dodder and its parasitic habits—Borage—Its favourite localities—Resort of Bees—Borage and cool tankard—The Dragon of Wantley—Cucumber *versus* Borage—Appearance of the plant.

Now we come to the vast group of composite flowers, *i.e.*, those whose apparently single flower is seen to be composed of a great number of smaller flowers, or "florets." The common daisy and dandelion are familiar examples of this group, which is so comprehensive that one-tenth of all known plants are said to belong to it.

Our first example will be the common GOAT'S-

BEARD (*Tragopogon pratensis*), the yellow flowers and long tapering leaves of which can be easily recognised from the illustration.

The plant derives its names from the beautiful winged seeds, which radiate much like those of the dandelion, but which are curiously interlaced so as to form a sort of cup.

The "Salsafy," once so largely used as a vegetable, is the root of another species of Goat's-beard, which is supposed not to be indigenous.

Then, in almost every field, especially alongside the hedges, we may find the common SOW-THISTLE, or MILK-THISTLE (*Sonchus oleraceus*), which is, in spite of its name, not a thistle at all, but, like the Goat's-beard, belongs to the Chicory group.

Still its thistle-like flowers and leaves form an excuse for a mistaken name. It is called the Milk-thistle on account of



YELLOW GOAT'S-BEARD.

is poured out when the plant is wounded; and Sow-thistle, because swine are fond of it: so are rabbits,

and any one who has kept those animals knows that they devour it too greedily for their own good if the supply be over-bountiful.

Its winged seeds frequently make their way into



SOW-THISTLE.

gardens, and if the weather should be wet for any time, the young Sow-thistle will shoot up with a luxuriance almost appalling to the gardener.

MANY plants go by the popular name of Dandelion,

but only one has a right to the name. This is the common DANDELION (*Leontodon taraxacum*), which is too familiar to need much description.

Like the stinging-nettle, the Dandelion is one of our neglected plants. The roots, when dried and ground, are as useful as the Chicory itself for mixing with coffee, and the leaves are a valuable addition to a salad.

As there seems to be some uncertainty in determining the precise species, I may mention that the true dandelion has

no stem, the leaves springing directly from the root.

The flower-stem is hollow, pouring out a white juice when cut, and bears only a single flower.

Lastly, when the seeds are ripe, the "receptacle" in which they have been



COMMON DANDELION.

fixed is rounded and retains the marks of the seeds, becoming what children term a pincushion.

The beautiful winged seeds are well worthy of examination, and if the reader should happen to possess

a microscope, or even a pocket magnifying lens, he will be well repaid by a careful examination of the flowers and seeds of all this group. There will be no difficulty in thus examining the dandelion, as there is scarcely a month in the year in which the flowers may not be found.

I may mention that the word *Leontodon* signifies "lion's tooth." In the French the plant is termed *Dent-de-lion*, of which our dandelion is a corruption.

WHILE the seeds of the dandelion are conveyed to great distances by the wind, those of the BURDOCK (*Arctium lappa*) are transported by very different means.

The flowers are purple, and are enclosed within an "involucre," which is armed with a vast number of sharp hook-like scales. These are sure to cling to the coats of animals which may touch them, and are thus spread abroad. Sheep are terribly worried by the "burs," as they are called, and the value of the fleece is much deteriorated by them.

Other long-haired animals suffer much from them. A skye-terrier of mine once contrived to put himself in a very unpleasant position.

He was a lively, impetuous dog, and must needs plunge among a quantity of burdock. The burs annoyed him greatly, and, while rolling about in his endeavours to pull them off, he entangled himself in a long bramble branch that was lying on the ground.

I heard him crying for help, and in spite of his distress could not help laughing at him. His head, ears, and tail were so tightly bound together that he

could not uncoil himself ; his legs were encircled with the pliant bramble so that he could not stand upright, and the whole of his body was thickly studded



BURDOCK.

with burs, dragging the long hair into staring tufts like those on Topsy's head.

He had sense enough to lie still for half an hour

while I extricated him. Both burs and bramble had to be cut out, and when, at the expense of much of his long coat, he was at length freed, he had become quite subdued, and followed me for the rest of the morning without stirring out of my reach.

Shakspeare was not likely to allow so conspicuous a plant as the Burdock to pass without notice. See, for example, the characteristic dialogue between Rosalind and Celia :—

“ ROSALIND. Oh, how full of briars is this work-a-day world !

CELIA. They are but Burs, cousin, thrown upon thee in holiday foolery ; if we walk not in the trodden paths, our very petticoats will catch them.

ROSALIND. I could shake them off my coat ; these burs are in my heart.”—*As You Like It*, i. 3.

Again, where the Duke of Burgundy is lamenting over the state of France, Shakspeare introduces the wild flowers of the field with wonderful force, the bur, as worst of all weeds, bringing up the rear :—

“ Her vine, the merry cheerer of the heart
Unpruned dies. Her fallow leas
The darnel, hemlock, and rank fumitory
Doth root upon ; while that the coulter rusts
That should deracinate such savagery.
The even mead, that erst brought sweetly forth
The freckled cowslip, burnet, and green clover,
Conceives by idleness, and nothing teems
But hateful docks, rough thistles, kecksies, burs,
Losing both beauty and utility.”

Henry V., v. 11.

WE cannot have a better type of the many English thistles than the MUSK-THISTLE (*Cárduus nutans*).

Waste places appear to be its rightful habitation, and there it may be harmless or even useful. But its beautiful winged seeds, commonly known as thistle-down, are carried far and wide by the winds, and are thus blown into cultivated ground where the plant is not wanted, and where it does active damage by extracting from the soil the nutriment which is wanted for other plants.

The flowers are deep purple, and possess a pleasing and rather powerful fragrance. Every one knows the prickly leaves of the thistle, which in this species have the veinings of the under surface covered with down. It is about two feet in height,



THISTLE.

and is in flower throughout the whole of the summer.

"*Nemo me impune lacessit*," is the proud motto of the SCOTCH THISTLE (*Onopordum acanthium*), which has been accepted as the emblematical flower of its

country, as is the rose of England, and the shamrock of Ireland. Yet, although called the Scotch Thistle,



SCOTCH THISTLE.

it is spread impartially over the whole of England, and, like the musk-thistle, is apt to intrude itself where it is not wanted. There is scarcely a road, a lane, or a hedge in which this thistle does not abound. If possible, it is even more prickly than its English relative. It may be easily distinguished from that plant by the flowers, which are dull

instead of deep purple, by the cottony leaves that are scattered on the stem, and by the shape of the "involucre." A glance at the figures of these two thistles will enable the reader to distinguish them as soon as he sees the plants.

ANOTHER very common English thistle is certainly the prettiest, though not the largest, of its kind. It is

popularly named the CORN-COCKLE or CORN-FLOWER (*Centaurea cy'anus*), and its form is well shown in the left-hand figure of the accompanying illustration.



CORN AND STAR THISTLES.

In corn-fields it is very plentiful, and with its beautiful blue flowers harmonises well with the scarlet of the red poppy and the yellow of the cherlock. Although the flowers are mostly of a bright blue, they are subject to considerable variations, passing through rose-colour into white.

The right-hand figure in the illustration represents the STAR-THISTLE (*Centaurea calcitrapa*).

Here again the "involucre" plays a conspicuous part, its scales being lengthened into long, sharp spikes radiating in different directions, and capable of inflicting very painful wounds. The name "calci-trapa" (which has been Anglicized into Calthrop) has been given to this thistle because the spikes bear some resemblance to the four-spiked iron weapon which was used in order to disable horses and check the advance of cavalry.

EVERY ONE must know the COLT'S-FOOT (*Tussilago farfara*) by sight, if not by name.

It flourishes everywhere, but on clay soils, even though they be not on damp low ground, it is so luxuriant and rapid in its growth that it entirely covers the ground unless it be continually cut down and not permitted to seed.

It was one of the most valued of medicines, and, as its name implies, was employed in the cure of cough, the Latin name for which is "*tussis*." It still holds a place among simple remedies, and colt's-foot lozenges are much used in loosening a hard and hacking cough. The large, down-covered leaves have been often used for a less beneficial purpose, namely, the adulteration of tobacco; and silly boys who cannot smoke the actual tobacco are apt to smoke dried colt's-foot by way of approving their manliness.

The flowers appear in the spring, followed by the feathered seeds, which are so much used by the goldfinch in the structure of its beautiful little nest.

After the flowers have vanished the leaves appear, and sometimes reach a very great size. A railway cutting through a clay soil is sure to be yellow in



COLT'S-FOOT.

spring from the flowers of the colt's-foot, and grey-green in summer and autumn from its leaves.

If the reader will refer to pages 176-7, he will find

there a figure and short description of the Groundsel. Its larger relative, the FIELD RAGWORT (*Senecio Jacobæa*) is here figured. Resembling the groundsel in many respects. it differs in many others.



RAGWORT.

In the first place, it grows to a very much greater size, often reaching a height of three feet as against the ten or twelve inches of the groundsel. Putting aside, however, its superior dimensions and tougher stem, it may be distinguished by the flowers, which radiate in a star-like form instead of being pressed closely together as in the groundsel.

It is remarkable that though the ragwort is common all over England, and is the food of the Cinnabar moth (*Callimorpha Jacobæa*), which takes its scientific name from its food-plant, the insect should be so local. The moth will never be found where there are no ragworts, but the presence of ragworts

is no proof that the moth can be found. About Oxford, there is scarcely a ragwort to be seen without the conspicuous larva of the moth feeding upon it. Yet, although the field close to my house in Kent was covered with these plants, and I examined them regularly for ten years, I never found the caterpillar, and only once saw the moth.

NOTHING need be said of the DAISY (*Bellis perennis*), but there are so many daisy-like plants, that one or two of them require a short notice. Studding the fields, and almost invariably plentiful on waste grounds, the WILD CHAMOMILE or FEVERFEW (*Matricaria parthénium*) is familiar to every one. The word Feverfew is a corruption of Febrifuge, and shows that the plant has medicinal properties, and is administered in cases of fever. The form in which it is generally prescribed is that of "Chamomile-tea." It is very nasty, like many other medicines, but as it retains its hold as a medicine to the present day, its efficacy must be balanced against its flavour.

Another plant, the COMMON CHAMOMILE (*Anthemis nobilis*) is used for the same purpose, and may at once be recognized by its finely-cut leaves, and its feeble stem, which trails along the ground. The name Chamomile is derived from the Greek word "chamai," which signifies "on the ground." Chamomile "tea," when made from this plant, is rather more grateful to the palate than that which is made from the feverfew, its very decided bitter being tempered by an aromatic flavour.

A plant which is often mistaken for the Chamomile

is the OX-EYE (*Chrysanthemum leucanthemum*), a figure of which is here given. It looks very like

an overgrown daisy, and, indeed, is generally considered as such. The petals of this plant are white, but there is a yellow species, popularly called the Corn Marigold, which is tolerably common in corn-fields.



CHAMOMILE.

Cultivated Ox-eyes are in great favour with florists, under the name of *Chrysanthemum*, the flower being considered of sufficient importance to be exhibited at flower shows, and take

prizes. As is the case with cultivated roses and tulips, the principal varieties are known by their

names, which are generally those of contemporary celebrities.

YARROW (*Achillea millefolium*) is very plentiful on poor soils. The flowers have a fragrant odour, and bees are very fond of it. The Latin word *millefolium*,



WHITE OX-EYE.

i.e. "thousand-leaved," has been corrupted into the popular name of Milfoil, and has been given to the plant on account of the shape of its leaves, which

are deeply cut into very fine strips. The flowers are white, stand boldly on their footstalks, and the plant

is a strong-growing one, reaching an average height of two feet.

It has been mentioned that the Bindweeds derive their popular name from the mode in which they bind together the herbage among which they grow.

The DODDER (*Cuscuta epithymum*) has much the same habit, but instead of twisting itself round them like the Bindweed, it insinuates its curious trailing stems among them, and mats them together in a confused, tangled mass.

On account of this habit it is sometimes called Strangle-weed, and when the plants are numerous they have been known to destroy whole

fields of clover, and to leave nothing of the clover but withered and dry bundles bound together with the red and still living stems of the Dodder.



DODDER.

So dependent is it on stronger plants for its support, that it never appears to exist alone, but is found entwined with various herbs. Several species of Dodder are known, and each seems to attach itself to some favourite plant ; so that we have the Flax-Dodder, the Thistle-Dodder, and the Heath-Dodder.

The illustration exhibits its peculiar form. The flowers are small, very waxen in their look, and of a pale pink colour.

I was for some time doubtful whether the BORAGE (*Borago officinalis*) should be classed among the flowers of the lane or the field, having found it plentifully in both. As, however, it may almost invariably be seen



BORAGE.

in waste places, and is not a constant inhabitant of lanes, I will place it among the field plants.

It is a peculiarly useful plant, and ought to be encouraged, if only for the single reason that it is one of

the favourite flowers of the hive-bee, which, fortunately for us, cares little for the cultivated plants, but clings to the commonest wild flowers. Heather, mallow, teasel, yarrow, clematis, honeysuckle, clover, and the like, swarm with bees, while the fanciful flowers of the horticulturist are contemptuously neglected.

But of all flowers the blue blossoms of the Borage seem to be the most attractive to the bee. I have from early childhood felt a peculiar love for the Borage. Large quantities of it grew in our garden, and the number of insects, especially bees, which were attracted to it made the borage clumps a favourite resort.

Borage has another use. When newly cut, the flower-stems exude a juice smelling like cucumber, and a "cool tankard" was thought to be imperfect without a tuft of borage in it. There is an old political and witty song, now forgotten as completely as the politics of the time, entitled "The Dragon of Wantley," and containing these lines,—

" Powell, as some folks drink small beer,
To cool them when they've drank hard,
Steeped in his brandy capsicum,
Like borage in cold tankard."

Now, however, the "cool tankard," particularly if it be "Badminton," requires borage only for ornament, and is made with slices of cucumber instead of the herb.

It is impossible to mistake the Borage, as it is sufficiently distinguished by the blue flowers, and the dense coating of rough, prickly hairs with which the leaves and stem are thickly covered.

CHAPTER XV.

FIELD FLOWERS (*concluded*).

The Mouse-ears—The Forget-me-not and its legend—Scorpion-grass—Signification of *Myosotis*—The Great Mullein—Its effect in a landscape—Its downy leaves—The Horehound—How recognized—Its use in medicine—The Primrose and its short blossom-life—Primroses in gardens—May-day garlands—The Cowslip—Cowslip balls—Cowslip tea—Cowslip wine—Purifying the blood—The Oxlip—How distinguished from the Cowslip—The Scarlet Pimpernel—Shepherd's Weather-glass—Pimpernels in gardens—The Bog Pimpernel—The Sorrel and its leaves—Hare and Hounds—The Hop and mode of growth—Its picturesqueness—The Daffodil—Its flowers and roots—The Snowdrop—Gardens and wild flowers—The Blue-bell or Wild Hyacinth—Its beauty and sweet perfume—Nature's fairyland—Bricks and mortar—The Crocus as a garden plant—Varieties of the Crocus—The Saffron Crocus—Uses of Saffron—The Cuckoo-pint—Lords and Ladies—Its various beauties—Poisonous juices—A rash bite—Use made of its root.

ALL the Mouse-ear group are familiar on account of one of them, the Forget-me-not, which, being an aquatic plant, is outside the limits of this book. In defiance however of its locality, and of the romantic legend to which that flower owes its name, the generality of people will persist in giving the name of Forget-me-

not to almost every mouse-ear, though it should grow on dry, and even on mountainous ground.

Most of us have heard of the Collar of S.S. worn by certain dignitaries, and some have seen it, but there are comparatively few who know its connection with the Forget-me-not.



SCORPION-GRASS.

"The royal adventurer, Henry of Lancaster,—the banished and aspiring Lancaster — appears to have been the person who gave to the *Myosótis arvensis*, or Forget-me-not, its emblematic and poetical meaning, by writing it, at the period of his exile, on his collar of S.S. with the initial letter of his *mot* or watch-word, *Souveigne-vous de moy*, thus rendering it the symbol of remembrance, and, like the subsequent fatal roses of York and Lancaster and Stuart, the lily of Bourbon, and the violet of Napoleon, an historical flower.

Few of those who at parting exchange this touching appeal to the memory are aware of the fact that it was first used as such by a royal Plantagenet prince, who was, perhaps, indebted to the agency of this

mystic blossom for the crown of England. It was with his hostess, at that time wife of the Duke of Bretagne, that Henry exchanged this token of goodwill and remembrance." — Agnes Strickland, 'Queens of England.'

One of the most plentiful of the land Mouse-ears is the PARTY - COLOURED SCORPION - GRASS (*Myosotis versicolor*), which is shown in the illustration. I may here observe that the word *Myosotis* is Greek, and literally signifies mouse-ear.

Dry banks, especially when partly sheltered by hedges, are the favourite spots of this pretty little plant. As is the general rule with the Mouse-ears, the flowers are blue; but they sometimes become yellow,



GREAT MULLEIN.

and it is rather curious to see blue and yellow blossoms on the same plant.

Both scientific names of this plant are appropriate, for the Latin word *versicolor* signifies changeableness in colour, and refers to the curious effect of the blue and yellow flowers in a single specimen.

A very imposing plant is the GREAT MULLEIN (*Verbascum Thapsus*), which is so large that only a portion of it can be figured.



WHITE HOREHOUND.

In favourable soils it sometimes attains five feet in height, and with its long clusters of large yellow flowers it almost rivals the Foxglove in pictorial effect. It cannot be mistaken, and can even be detected by the touch, its soft, thick, downy leaves being an unfailing proof of its identity. One or two other species of Mullein in-

habit England, but they are comparatively rare and require no notice.

I FIND, rather to my astonishment, that the HOREHOUND (*Marrubium vulgare*) is stated to be rather an uncommon plant. My own experience does not coincide with this opinion, for the Horehound has been familiar to me since childhood. It is true that I used in early days to mistake it for a kind of dead-nettle, and was botanically wrong, but the plant was nearly as well known to me as the dead-nettles themselves.

The horehound cannot be mistaken by any one who has even a slight knowledge of botany. It prefers waste places, and is on an average about eighteen inches in height. The clusters of little white flowers are sheltered at the base of the leaves, as is shown in the illustration, and the leaves themselves are rather deeply wrinkled, and covered with down.

Horehound is another of the "simples" which has retained its position as a harmless and useful medicine. Horehound "tea" is employed for the cure of coughs, and being, though bitter, decidedly aromatic, is not so distasteful as some other infusions of a similar nature. Horehound lozenges are also used for the alleviation of sore throat.

" Pale primroses
That die unmarried ere they can behold
Bright Phœbus in his strength."—SHAKSPEARE.

IT is a pity that the blossoms of the PRIMROSE (*Primula vulgaris*) should last for so short a time, for they are exceedingly beautiful, and are always welcomed as the harbingers of spring. Indeed, the name of *Primula*, which is formed from the Latin

word *primus*, indicates that it is one of the first flowers of the year.



PRIMROSE.

Some persons are apt to go about with a trowel and

basket and take the primroses out of the fields and transplant them into their gardens. I think that they are committing a desecration. Let them pluck the primroses if they will, for new blossoms will grow in their places. But let them not tear the primroses from their appropriate surroundings and put them into gardens, where they are totally incongruous residents. Primroses and cultivated flowers are unsuited to each other, and a primrose in a garden is as completely out of place as would be a dahlia in a hedge.

There is little use, however, in plucking primroses. Few wild flowers can long endure a severance from their parent stem, and the Primrose is one of the most sensitive in this respect. Great quantities are often gathered for May-day garlands, but they are sure to fade in a comparatively short time, beginning to droop and look flaccid and miserable some few hours after they are plucked. Let all who love and value their wild flowers take John Hartley's advice, and "leave them for another."

FAIRY. "And I serve the Fairy Queen
To dew her orbs upon the green.
The cowslips tall her pensioners be,
In their gold coats spots you see.
These be rubies, fairy favours,
In these freckles live their savours ;
I must go seek some dewdrops here,
And hang a pearl in ev'ry cowslip's ear."
SHAKSPEARE—*Midsummer Night's Dream*.

EVERY ONE knows of the COWSLIP (*Primula véris*), though I have been astonished at the many educated persons I have met, who would not know a cowslip

if they saw it growing. Many have heard of cowslip-balls, cowslip-wine, and cowslip-tea, though they have never seen the balls, nor tasted the tea or wine.

As to the balls, they are easily made by plucking



COWSLIP.

the heads, or "umbels" as they are called, as short as possible, hanging them in a row along a string, and then drawing the ends of the string together and tying them. As to cowslip-wine, when well made, it is not worse than any other home-made wine; and cowslip-tea is generally consumed by children, whose powers of making-believe are illimitable, and who persuade themselves that with plenty of sugar and milk, it is quite a luxury. However this may be, cowslip-tea is in many rural places much esteemed for its powers of "purifying the blood," a vague and mysterious phrase, which is all-convincing to those who know nothing about the blood and its office.

ALMOST intermediate between the Cowslip and the Primrose is the OXLIP (*Primula elátior*), which might be mistaken for the Cowslip, except that the flowers are of a paler yellow, and more tubular in form, and the expanded petals are flattened, instead of bell-shaped. It is not so plentiful as the Cowslip, but in some localities may be found in tolerable plenty.

FEW persons would imagine that the pretty SCARLET PIMPERNEL (*Anagallis arvensis*) belongs to the Primrose tribe, but such is the botanical fact.

It is scattered over the fields in great plenty, and as its scarlet flowers are only open in fine weather, it is popularly called the Shepherd's Weather-glass; but, as the plant is only in flower during June and July, the shepherd who depended for his knowledge of the weather on the Pimpernel would be in very bad case during the rest of the year.

It often makes its appearance in gardens, where it is banished as a weed, but its flowers are so pretty that I never could destroy it in my own garden. The colour is rather variable, and there is even a Blue Pimpernel, in which the flower is blue with a scarlet centre. Some botanists designate it as a different species under the name of *Anagallis cærulea*, but I believe that the best authorities are now agreed that it is only a variety.



PIMPERNELS.

The BOG PIMPERNEL (*Anagallis tenella*) may be distinguished by its larger and rose-coloured flowers. Its popular name is scarcely appropriate, as, although it needs a good supply of water, it is not confined to

boggy ground, but can generally be seen on the edges of little rivulets, such as those which run along the sides of lanes.

The common SORREL (*Rumex acetosa*) is too well known to need much description, and can easily be recognized by the accompanying illustration. The numerous flowers are green with a tinge of pink, or pink with a tinge of green, according to circumstances.

The leaves are full of a pleasantly acid juice, and are very useful in salads.

This property renders the leaves extremely valuable in quenching thirst. In my



SORREL.

school-days there were several fields in the neighbourhood, which were renowned among us for the abundance of sorrel; so when engaged in hare-and-hounds a judicious hare always used to take one of these fields on his return. He knew that he should be in a state of raging thirst before he reached home, and he was not foolish enough to drink water, which would cause him to run a risk of capture by losing his wind.

OPINIONS seem to be divided about the Hop (*Húmulus lupulus*), some botanists regarding it as a foreign importation which has been naturalized, and others as a genuinely native plant which has been improved by cultivation.

However this may be, it is too plentiful and too picturesque to be omitted from the present book. The latter term is scarcely applicable to the Hops as they appear in the cultivated grounds, and the plant only looks picturesque in proportion as it overpasses the limits of its upright pole, and breaks the formality of the straight rows in which it is planted.

It is in a hedge, and when it is permitted to grow at its own free will, that the hop becomes really picturesque. Being a perennial, it increases yearly, and there are few more picturesque terminations of a garden walk than a hedge which is almost concealed by masses of hop tumbling about in unconstrained freedom. I might have much to say of the famous Hop-gardens of Kent, having lived in their midst for many years, but this little work treats of wild, and not of cultivated flowers.

Suffice it to say that the peculiar aromatic bitterness of good beer is owing to the catkins of the hop, and that the same catkins give out a pleasant and soporific aroma, so that a pillow stuffed with hops will often induce sleep when other medicines are either useless or dangerous.



HOP.

OF the two following plants there is not much to say, as they are both extremely familiar.

The first is the common DAFFODIL (*Narcissus pseudo-Narcissus*), so well known as one of our early

spring flowers, and for that reason much favoured.

“ Daffodils
That come before the swallow dares, and fill
The winds of March with beauty.”—SHAKSPEARE.

It is, however, rather a dangerous plant, as the large yellow flowers are poisonous, and might be fatal to young children, who have a habit of putting everything into their mouths. The root acts as an emetic, but is not used in modern medicine.

The edges of copses are favourite spots with the Daffodil, which, however, often makes its way into cultivated grounds, especially orchards.

THE pretty SNOWDROP (*Galánthus nivális*) is closely allied to the Daffodil. Both its scientific names are appropriate, *Galánthus* being formed from two Greek words signifying “milk-flower,” and *nivális* being the Latin for “snowy.”

It is a still earlier flower than the Daffodil, sometimes delighting our eyes with its white blossoms in the middle of January. Like the Daffodil, it is a bulbous plant, and its bulb possesses emetic properties.

Like the Lily of the Valley, the Daffodil, and the Crocus, the Snowdrop is one of the few wild flowers which do not seem out of place in a garden. Indeed, in early spring-time, the flower-beds and garden-walks may advantageously be edged with such flowers, the formality of their arrangement not detracting from their beauty.

The WILD HYACINTH or BLUE-BELL (*Hyacinthus nūtans*) more than deserves its fame. A single flower



DAFFODIL.

is beautiful in itself, with its blue, bell-like flowers nodding gracefully on their stems. But it increases with a marvellous rapidity in favourable situations.

It is perennial, so that it will last for a series of years,



WILD HYACINTH.

and scatters its little black seeds so profusely, that a single plant will soon be the progenitor of thousands.

There is in my mind one spot, which used to be a favourite haunt of mine. It was a hilly slope, with a rippling stream-running round the foot of the hill, and with trees, mostly fir and oak, rather thickly spread over it. There were ferns, brambles, fox-gloves, violets, periwinkles, and other wild flowers, all permitted to grow as they chose. The place was full of nightingales, and those who are

fond of squirrels might see as many as they liked.

But its chief glory lay in the Blue-bell. About the end of May, the whole place was one undulating sheet of azure, almost too intense for the eye when



SAFFRON CROCUS.

the sun shone upon it. And the perfume from the myriads on myriads of Blue-bells was so powerful, that it could be perceived at a distance of several hundred yards. It was a spot which, once seen, would never be forgotten.

I write regretfully in the past tense, for the omnivorous brick-and-mortar demon has swallowed it, and a piece of Nature's fairy-land has vanished for ever.

I have already mentioned that several wild flowers were suitable for gardens, and that one of them was the Crocus. Many varieties of Crocus are reared by horticulturists, and are certainly improved by cultivation both in size and beauty. The principal of them are the SPRING CROCUS (*Crocus vernus*), which is purple, and the YELLOW CROCUS (*Crocus aureus*). They are chosen because they flower early in the spring, and their beautifully-contrasted colours form a very pleasant relief to the eye after the snows of winter.

One species produces a valuable article of commerce, and is called the SAFFRON CROCUS (*Crocus sativus*). At Walden, in Essex, generally called Saffron Walden, this Crocus is regularly cultivated for the sake of the "stigmas," which, when dried, are the saffron of the druggist and pastrycook. These stigmas are long and drooping, and, as the reader will see by reference to the illustration, hang over the petals when the flower is full blown.

In Ireland saffron cakes are quite an institution. Saffron is used as a medicine, and furnishes a delicate dye. As the flower blossoms in the autumn, the Saffron Crocus would be of little use in a garden, and is never cultivated except for the market.

WITH one more plant we must end the Field Flowers. This is the CUCKOO-PINT (*Arum maculatum*), which has always been a great favourite with children, on account of its beautiful colouring, and the quaintness of its form. It has received a variety of names, such as Wake-robin, Lords-and-ladies, &c. The first name, however, is the most appropriate, and has

been given to it because it flowers in May, when the Cuckoo is in its best voice.

When in full bloom, as seen in the illustration, it is a most remarkable flower. The most conspicuous part is the "spadix" or column, which is mostly purple, but sometimes pink or crimson, and upon it are set the little flowers.

The spadix is enveloped in a sheath, which is covered on the interior with dark purple spots, as are the leaves in most specimens. Before the flowers are fully developed, the sheath is wrapped completely round the spadix, so as to conceal it from view. Below the spadix is seen a ring of round berries, which become scarlet when ripe, and almost compensate for the loss of the beautiful spadix, which falls off in a very short time after reaching maturity.



CUCKOO-PINT.

Very young children should not be allowed to pluck the Cuckoo-pint, as both the leaves and

berries are poisonous. This I know by personal experience, for once when at school, I was "dared" to bite a leaf, and after the manner of boys, did so. The juice, though I only gave the leaf one small bite, caused my tongue and lips to swell to such an extent, that I felt in danger of choking, and could not speak properly for several days afterwards.

The root is also poisonous when raw, but, like that of the South American cassava, or manioc, becomes not only harmless but nutritious when cooked. Indeed, in some parts of England, notably in the Isle of Portland, the Cuckoo-pint is cultivated for the sake of the starchy product of the root. Gradually, however, this native product has been superseded by imported foods of a similar character, such as arrow-root, sago, semolina, tapioca, &c. In many parts of England the mode of manufacture is entirely forgotten, and even in the Isle of Portland the plant will soon be disused as an article of food.

There is no difficulty in finding the Cuckoo-pint. In the spring-time it is easily detected by the peculiar leaves and pointed sheath of the spadix; towards the end of spring, the rich purple of the spadix betrays it, and in the summer its clusters of scarlet berries stand out conspicuously, though the leaves, spadix and sheath have withered away.

THE END.

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